***Staff is recommending that item 5.1 be continued to a date uncertain in 2023.**

City of St. Helena
Planning Commission
Regular Meeting
Tuesday, November 1, 2022 @ 6:00 PM (PST)
Vintage Hall Board Room - Second Floor
465 Main Street, St. Helena

PLEASE NOTE: Any person who wishes to speak regarding an item on the agenda or make a comment under the "Oral Communication" portion of the agenda may do so, but please observe the time limit of four minutes.

Simultaneous Spanish interpretation services during meetings can be scheduled upon request. To ensure interpreters are available, requests must be made at least 72 hours in advance by calling the Office of the City Clerk at (707) 968-2640 or emailing cityclerk@cityofsthelena.org.

The schedule of upcoming meetings and published meeting agendas can be found on the City of St. Helena website at https://sthelena.civicweb.net/portal/.

Servicios de interpretación en español durante la reunión pueden ser solicitados por el público. Para asegurar que los intérpretes estén disponibles, los servicios tienen que ser solicitados al menos 72 horas antes de la reunión llamando a la oficina de la Secretaria de la Ciudad al (707) 968-2640 o por correo electrónico a cityclerk@cityofsthelena.org .

El horario de las reuniones publicadas y próximas puede ser localizado en el sitio de web de la Ciudad en https://sthelena.civicweb.net/portal/ .

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Page

1. PLEDGE OF ALLEGIANCE

2. CALL TO ORDER AND ROLL CALL
   Chair: John Ponte
   Commissioners: Autumn Anderson, Rosaura Segura, Marika Rothfeld and Chris Warner
   (Commissioner Warner will participate via Zoom from this location: 646 Wallis Road, Rye, New Hampshire)

   City staff present at the meeting will be noted in the minutes.

3. PUBLIC FORUM:
   This is an opportunity for the public to address the Commission on items of interest to the public that are NOT listed on the agenda. Because of restrictions imposed by the Brown Act, the Commission may not engage in discussion nor take action on matters not described on the agenda. **Please observe the time limit of four minutes.**
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4. CONSENT ITEMS

Members of the Commission or the public may ask that any items be considered individually for purposes of considering alternative action, for extended discussion, or for public comment. Unless that is done, one motion may be used to adopt all recommended actions. (Roll Call Vote)

4.1. Approval of Minutes: September 29, 2022 and October 18, 2022. 9 - 16

Special Planning Commission Minutes 09.29.22
Regular Planning Commission Minutes 10.18.22

5. PUBLIC HEARINGS

***Staff is recommending that item 5.1 be continued to a date uncertain in 2023.**

5.1. Request by Ben and Kelly Vanzutphen to subdivide a 16.9-acre parcel to establish 51 single-family residential lots, 11 of which are proposed with accessory dwelling units on approximately 13.4 acres. A 3.13-acre parcel will be established to accommodate a 25-unit multi-family housing development. Two additional remnant parcels (Parcel A; 0.06 acres) and (Parcel B; 0.04 acres) will remain with no plans for future development. A total of 87 units are intended to be built. The currently vacant project site is located north of Hunt Avenue and east of the future extension of Adams Street within the Medium Density Residential (MR) Zoning and (MDR) General Plan districts. 17 - 3219

CEQA Determination: Environment Impact Report, Mitigation Monitoring and Reporting Program, Findings of Fact and Statement of Overriding Considerations

Recommendation:

For the reasons described above, staff recommends that the Planning Commission:

1. Recommend that the City Council adopt the attached Resolution recommending certification of the Final EIR, approval of the Mitigation Monitoring Program, Findings of Fact and Statement of Overriding Considerations; and
2. Recommend that the City Council adopt the attached Resolution recommending approval the requested Tentative Map No. 2022-001, File #PL10-040 for the Hunter Subdivision project.

Hunter Subdivision - Staff Report
Proposed Tentative Map
1. Public Comment_Boyle
2. Public Comment_Kelly
3. Public Comment_Luria
4. Public Comment_Alderman
5. Public Comment_Villegas
6. Public Comment_Corkill
7. Public Comment_Williams
8. Public Comment_Lavagnino
9. Public Comment_Green
10. Public Comment_Kelly(2)
11. Public Comment_Powell

12. Public Comment_Stielau
13. Public Comment_B.Alderman
14. Public Comment_Odegard
15. Public Comment_Dale
16. Public Comment_Leininger
17. Public Comment_Armington
18. Public Comment_Smith
19. Public Comment_Nelson
20. Public Comment_Powell
21. Public Comment_Robison
22. Public Comment_Tim
23. Public Comment_SylviaWayson
24. Public Comment_NortonNixon
25. Public Comment_Siobal
26. Public Comment_Angus
27. Public Comment_Ward
28. Public Comment_Crosman
29. Public Comment_DeMarco
30. Public Comment_Heye
31. Public Comment_Offord
32. Public Comment_Echols
33. Public Comment_Dell
34. Public Comment_Candia
35. Public Comment_Strachan
36. Public Comment_West
37. Public Comment_Hansen
38. Public Comment_Bergeron
39. Public Comment_Lloreda
40. Public Comment_Grimm
41. Public Comment_Kistner
42. Public Comment_Glasso
43. Public Comment_Nevero
44. Public Comment_Batchelor
45. Public Comment_Armington
46. Public Comment_Long
47. Public Comment_Scott
48. Public Comment_McWilliams
49. Public Comment_McCorkle
50. Public Comment_DeMan
51. Public Comment_Akersloot
52. Public Comment_Buckley
53. Public Comment_Gundling
54. Public Comment_Vermeulen
55. Public Comment_Davies
56. Public Comment_Rogers
57. Public Comment_McClory
58. Public Comment_Pelosi
59. Public Comment_Smith
60. Public Comment_Gold
61. Public Comment_Lowry

62. Public Comment_Goldfarb
63. Public Comment_Beito
64. Public Comment_Goyins
65. Public Comment_Green
66. Public Comment_DLavagnino
67. Public Comment_Gundling(2)
68. Public Comment_Matthews
69. Public Comment_Antor
70. Public Comment_Cotten
71. Public Comment_Gingerelli
72. Public Comment_West(2)
73. Public Comment_Candia(2)
74. Public Comment_Brown
75. Public Comment_Toller
76. Public Comment_Wheaton
77. Public Comment_Laurence
78. Public Comment_GNelson
79. Public Comment_Ferrell
80. Public Comment_Small
81. Public Comment_Eftekari
82. Public Comment_Wilson
83. Public Comment_Martin
84. Public Comment_McNabb
85. Public Comment_Childs
86. Public Comment_Oggenfuss
87. Public Comment_Pohlen
88. Public Commnet_OTSH
89. Public Comment_McCreedy
90. Public Comment_LCorkill
91. Public Comment_DNelson
92. Public Comment_Mills
93. Public Comment_Gingerelli(2)
94. Public Comment_Bouligny
95. Public Comment_JLavagnino
96. Public Comment_Mosler
97. Public Comment_Crebs
98. Public Comment_Stuart
99. Public Comment_DPFLaw
100. Public Comment_DPFLaw(2)
101. Public Comment_Zivkovic
102. Public Comment_Avery
103. Public Comment_Milliken
104. Public Comment_Milliken(2)
105. Public Comment_Milliken(3)
106. Public Comment_Krsek
107. Public Comment_Olivier
108. Public Comment_Jonelis
109. Public Comment_Kelly(3)
110. Public Comment_Lavigne
111. Public Comment_NCBicycleCoalition

112. Public Comment_Hansen
FINAL Consolidated Conditions of Approval Response to Applicant
Staff PPT. Presentation
Applicant PPT. Presentation

6. SCHEDULED MATTERS

6.1. Request by Vanguard Properties, Inc. for a Planning Commission Sign Permit approval in order to approve two identification banners on the property located at 1345 Railroad Avenue in the Central Business (CB) zoning district. 3221 - 3230

CEQA Determination: This project is exempt from the requirements of CEQA pursuant to Section 15311, Class 11(a) of the CEQA Guidelines, which exempts on-premise business signs.
Prepared By: Xinia Gamero, Permit Technician III
Recommendation:
For the reasons described above, staff recommends that the Planning Commission:

1. Determine that the project is exempt from the requirements of CEQA pursuant to Section 15311 of the CEQA Guidelines; and
2. Approve the application for a Planning Commission sign permit at 1345 Railroad Avenue permitting the signage described in this report in the compliance with the attached resolution.

1345 Railroad Ave. - Staff Report

7. DEPARTMENT REPORTS
This is an opportunity for staff to report on or update the Commission on any relevant matters.

8. AGENDA FORCAST
Below is a link to a list of pending and upcoming projects which may be of interest to the community.

This is also an opportunity for the Commission as a whole to request items be placed on future agendas for discussion. These items should be consistent with, and work to implement adopted Council Goals.

A list of all current planning projects is available on our city website in the link below:
http://www.cityofsthelena.org/projects?term_node_tid_depth=21

Please contact the assigned project Planner for additional questions.

9. ADJOURNMENT
The next Regular Planning Commission meeting is scheduled for November 15, 2022 at 6:00 p.m. in the Vintage Hall Board Room located at 465 Main Street.

This agenda was posted at City Hall, 1572 Railroad Avenue, and at Vintage Hall, 465 Main Street, St. Helena, California on October 21, 2022. Republished with update November 1, 2022 at 2:35pm.

Maya DeRosa, Community Development Director

Appeal. A person who is dissatisfied with a decision of the Planning Commission may appeal that decision to the City Council pursuant to Municipal Code Section 17.08.180, Appeal procedure. Actions of the Planning Commission will be listed on the City Council agenda the following Tuesday to give the City Council opportunity to review the Planning Commission's decision. Absent of an appeal by the City Council or by a citizen, the appeal period will terminate two weeks after the Planning Commission hearing.

Special Assistance for the Disabled. In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please call the City Clerk's Office (707) 967-2792. Notification 48 hours prior to the meeting will enable City to make reasonable arrangements to ensure accessibility to this meeting (28 CFR35.102-35.104 ADA Title II). However, City staff will attempt to assist at any time with accessibility. The City Clerk has equipment to assist those with a hearing impairment.

PUBLIC TESTIMONY PROCEDURES

Pursuant to the Government Code Section 54954.3, the public may address the Commission on each agenda item during the Commission's consideration of that item. Each speaker has the option to state his or her name for the record before testifying. Depending on the number of speakers or the interest of the item, the Planning Commission Chairman may also restrict, at his/her discretion, the speaker's time to three minutes. The Chairman may also restrict public comments if they become irrelevant to the agenda item or repetitious of prior comments. All persons interested may appear and be heard or submit written statements prior to the Planning Commission meeting. Please note that if you challenge the City's decision on any of these matters in court, you may be limited to raising only those issues you or someone else raised at the meeting or in written correspondence delivered to the City at, or prior to, the meeting.

CHALLENGING DECISIONS OF CITY ENTITIES

The time limit within which to commence any lawsuit or legal challenge to any quasi-adjudicative decision made by the City of St. Helena is governed by Section 1094.6 of the Code of Civil Procedure, unless a shorter limitation period is specified by any other provision, including without limitation Government Code section 65009 applicable to many land use and zoning decisions, Government Code section 66499.37 applicable to the Subdivision Map Act, and Public Resources Code section 21167 applicable to the California Environmental Quality Act (CEQA). Under Section 1094.6, any lawsuit or legal challenge to any quasi-adjudicative decision made by the City must be filed no later than the 90th day following the date on which such decision becomes final. Any lawsuit or legal challenge, which is not filed within that 90-day period, will be barred. Government Code section 65009 and 66499.37, and Public Resources Code section 21167, impose shorter limitations periods and requirements, including timely service in addition to filing.

If a person wishes to challenge the above actions in court, they may be limited to raising only those issues they or someone else raised at the meeting described in this notice, or in written correspondence delivered to the City of St. Helena, at or prior to the meeting. In addition, judicial challenge may be limited or barred where the interested party has not sought and exhausted all available administrative remedies.

SUPPLEMENTAL MATERIAL RECEIVED AFTER THE POSTING OF THE AGENDA

Any supplemental writings or documents distributed to a majority of the Planning Commission regarding any item on this Agenda, after the posting of the Agenda, will be available for public review in the Planning Department's Office located at 1480 Main Street, St. Helena, California, during normal business hours. In addition, such writings or documents will be made available on the City's web site at http://cityofsthelena.org and will be available for public review at the respective meeting.

MINUTES
City of St. Helena
Special Planning Commission Meeting
Thursday, September 29, 2022 @ 6:00 PM
Vintage Hall Board Room - Second Floor
465 Main Street, St. Helena

A complete video recording of this meeting, except for closed session, can be found at https://sthelena.civicweb.net/Portal/ or by calling the City Clerk at (707) 968-2742. The City Council video is the official record of the Council meeting.

Present:	Commissioner Autumn Anderson, Chair John Ponte, Commissioner Rosaura Segura, and Christopher Warner
Absent:	Commissioner Marika Rothfeld
Staff:	Community Development Director Maya DeRosa, City Attorney Ethan Walsh, and Planning Commission Secretary Xinia Gamero.

1. PLEDGE OF ALLEGIANCE

2. CALL TO ORDER AND ROLL CALL

3. PUBLIC FORUM:

None.

4. CONSENT ITEMS

4.1 Approval of Minutes: September 6, 2022

Commissioner Rosaura Segura moved to approve the Minutes of September 6, 2022. The motion was seconded by Vice-Chair Autumn Anderson and on roll call carried by the following vote:

AYES: Autumn Anderson, John Ponte, Rosaura Segura, and Christopher Warner
NOES: None
ABSENT: Marika Rothfeld
ABSTAIN: None
RECUSE: None

5. PUBLIC HEARINGS

5.1 Request by LMR Destinations LLC for a Use Permit Amendment and Development Agreement Amendment approval in order to amend the storm water drainage improvement requirements and provide additional funding for water conservation on the property located at 1000 Mills Lane in the Service Commercial (SC) and Twenty-acre Agriculture (A-20) districts.

Prepared By: Maya DeRosa, Community Development Director

Community Development Director Maya DeRosa addressed the Planning Commission.

Chair Ponte opened the public hearing.

No ex parte communication was disclosed by the Planning Commission.

Community Development Director Maya DeRosa reported on the item and showed a presentation.

City Attorney Ethan Walsh addressed the Planning Commission.

Applicant, Ted Hall and Legal Counsel Rob Anglin addressed the Planning Commission.

David Gold addressed the Planning Commission.

Chair Ponte closed the public hearing.

Chair Ponte re-opened the public hearing.

Ted Hall addressed the Planning Commission.

Commissioner Christopher Warner moved that the Planning Commission find that none of the conditions specified in State CEQA Guidelines section 15162 require the preparation of a subsequent or supplemental EIR or MND and no additional environmental review is required; and adopt the attached resolution recommending the City Council make specific findings and recommending that the City Council adopt an Ordinance approving a Development Agreement Amendment between the applicant and the City of St. Helena for the LMR Destinations LLC lodging project at 1000 Mills Lane; and adopt the attached resolution recommending the City Council make specific findings and recommending that the City Council approve a Use Permit Amendment for the LMR Destinations LLC Lodging project at 1000 Mills Lane. The motion was seconded by Vice-Chair Autumn Anderson and on roll call carried by the following vote:

AYES: Autumn Anderson, John Ponte, Rosaura Segura, and Christopher Warner
NOES: None
ABSENT: Marika Rothfeld
ABSTAIN: None
RECUSE: None

6. NEW BUSINESS

None.

7. SCHEDULED MATTERS

None.

8. DEPARTMENT REPORTS

Community Development Director Maya DeRosa reported on the following:

- Regular Planning Commission meeting of October 4 is cancelled.
- Two public hearing items will be brought before the Planning Commission at the October 18 meeting; agenda will be delayed and published the week prior to the meeting.

9. AGENDA FORCAST

10. ADJOURNMENT

Chair Ponte adjourned the meeting at **6:30 p.m.**

The September 29, 2022 minutes were approved at the _____ Planning Commission meeting.

APPROVED:

_____
John Ponte, Planning Commission Chair

ATTEST:

_____
Maya DeRosa, AICP
Community Development Director

MINUTES
City of St. Helena
Planning Commission Meeting
Tuesday, October 18, 2022 @ 6:00 PM
Vintage Hall Board Room - Second Floor
465 Main Street, St. Helena

A complete video recording of this meeting, except for closed session, can be found at https://sthelena.civicweb.net/Portal/ or by calling the City Clerk at (707) 967-2792. The Planning Commission video is the official record of the Planning Commission meeting.

Present:	Chair John Ponte, Vice-Chair Autumn Anderson, Commissioner Rosaura Segura, Commissioner Marika Rothfeld, and Commissioner Christopher Warner
Absent:	None
Staff Present:	Maya DeRosa, Community Development Director, Joseph Leach, Public Works Director and City Engineer, and Xinia Gamero, Planning Commission Secretary

1. PLEDGE OF ALLEGIANCE

2. CALL TO ORDER AND ROLL CALL

3. PUBLIC FORUM:

No public comment was received.

4. CONSENT ITEMS

None.

Vice-Chair Anderson recommended the Planning Commission move item 5.2 on the agenda prior to public hearing of item 5.1. Commissioner Warner and the Planning Commission supported the recommendation.

5. PUBLIC HEARINGS

5.2 Request by Joseph Farrell on behalf of Justin Hafen, for consideration and approval of a demolition of existing structures and design review to accommodate the construction of a single-family home, a garage and accessory dwelling unit on a property located at 1310 Hudson Avenue in the Medium Density Residential (MR) zoning district.
Prepared By: Chantal Powers, Contract Planner

Chair Ponte opened the public hearing.

No ex parte communication was disclosed by the Planning Commission.

Community Development Director Maya DeRosa addressed the Planning Commission.

Contract Planner Chantal Power reported on the item and showed a presentation.

Project Architect Joe Farrell addressed the Planning Commission.

Chair Ponte closed the public hearing.

Chair Ponte opened the public hearing.

Jeffrey Warren, neighbor, addressed the Planning Commission.

Commissioner Christopher Warner moved to determine that the project is exempt from the requirements of CEQA pursuant to Section15303; and accept the required findings and approve the attached resolution granting design review and demolition permit approval for the proposed construction on the property located at 1310 Hudson Avenue. The motion was seconded by Commissioner Rosaura Segura and on roll call carried by the following vote:

AYES: Autumn Anderson, Rosaura Segura, John Ponte, Marika Rothfeld, and Christopher Warner
NOES: None
ABSENT: None
ABSTAIN: None
RECUSE: None

5.1 Request by Sasha Janev on behalf of Lorraine and Joe Berchtold for adoption of a resolution approving a demolition permit and design review to demolish an existing residence and accessory structures to accommodate the construction of a new single-family home and accessory dwelling unit on the property located at 2126 Madrona Avenue in the Medium Density Residential zoning district.

CEQA Determination: Categorically Exempt pursuant to Section 15301 (Existing Facilities) and 15303 (Construction or Conversion of Small Structures) of the CEQA Guidelines
Prepared By: Chantal Power, Contract Planner

Chair Ponte opened the public hearing.

No ex parte communication disclosed by the Planning Commission.

Contract Planner Chantal Power reported on the item and showed a presentation.

Sasha Janev, architect, Rob Anglin, legal counsel, and Mike Hubbard, family

friend, Claudia Schmidt, landscape designer addressed the Planning Commission.

Vice-Chair Anderson called for a recess at 7:44pm.

Chair Ponte reconvened the meeting at 7:52pm

Chair Ponte opened the public hearing.

Public speakers; Patti Herdell, Kathleen Herdell, Martin Hintz, Phil Murphy, Elaine De Man, Annette Smith, Diane Grosianno, John Zimmerman, Jody Morlet, Chris Herdell, Kelly Wheaton, Mary Agee, Frank Rodriguez.

Rob Anglin and Sasha Janev addressed the Planning Commission.

Chair Ponte closed the public hearing.

Commissioner Christopher Warner moved to extend the meeting until 9:20pm. The motion was seconded by Commissioner Autumn Anderson and on roll call carried by the following vote:

AYES: Autumn Anderson, Christopher Warner, Rosaura Segura, John Ponte, and Marika Rothfeld
NOES: None
ABSENT: None
ABSTAIN: None
RECUSE: None

Chair Ponte re-opened the public hearing.

Chair Ponte closed the public hearing.

Sasha Janev, Rob Anglin and Mike Hubbard addressed the Planning Commission.

Commissioner Christopher Warner moved for continuance of the Planning Commission hearing scheduled for December 6, 2022. The applicant was advised to provide additional information and revisions to the project as follows:
1)Provide more detail to the Water Neutrality Report;
2)Provide the Spottswoode Winery vineyard rehabilitation agreement, with expected or target production in tonnage per acre;
3)Provide a Drainage Report and Sewer Plans; (And other issues as considered relevant by both parties)
4)Consideration to reduce project size and scale;
5)Install story poles;
6)Schedule meetings with neighboring property owners and provide record of those meetings.

The motion was seconded by Vice-Chair Autumn Anderson and on roll call carried by the following vote:

AYES: Autumn Anderson, Rosaura Segura, John Ponte, Marika Rothfeld, and Christopher Warner
NOES: None
ABSENT: None
ABSTAIN: None
RECUSE: None

6. SCHEDULED MATTERS

None.

7. DEPARTMENT REPORTS

Community Development Director Maya DeRosa reported on the following:

- Public review draft of the Comprehensive Zoning Code Update- Joint City Council & Planning Commission meeting Wednesday October 26 at 5:00 p.m.
- Public review draft of the Comprehensive Zoning Code Update to be released Wednesday, October 19, 2022.

8. AGENDA FORCAST

9. ADJOURNMENT

Chair Ponte adjourned the meeting at **9:20 p.m.**

The October 18, 2022 minutes were approved at the _____ Planning Commission meeting.

APPROVED:

_____
John Ponte, Planning Commission Chair

ATTEST:

_____
Maya DeRosa, AICP
Community Development Director

PLANNING COMMISSION REPORT

Planning Commission Meeting of November 1, 2022

FILE NUMBER: PL10-040 and TM 2022-001

SUBJECT: Request by Ben and Kelly Vanzutphen to subdivide a 16.9-acre parcel to establish 51 single-family residential lots, 11 of which are proposed with accessory dwelling units on approximately 13.4 acres. A 3.13-acre parcel will be established to accommodate a 25-unit multi-family housing development. Two additional remnant parcels (Parcel A; 0.06 acres) and (Parcel B; 0.04 acres) will remain with no plans for future development. A total of 87 units are intended to be built. The currently vacant project site is located north of Hunt Avenue and east of the future extension of Adams Street within the Medium Density Residential (MR) Zoning and (MDR) General Plan districts.

APPLICATION FILED:09/09/10 **ACCEPTED AS COMPLETE:**03/25/11

LOCATION OF PROPERTY: North of Hunt Avenue, east of the future extension of Adams Street

APN: 009-030-057

GENERAL PLAN/ZONING: Medium Density Residential (MDR/MR)

APPLICANT: Ben and Kelly Van Zutphen **PHONE:** 707-431-8582

BACKGROUND

The following is a discussion of the project's setting and background.

1993 General Plan

The subject property has been designated since at least 1993 for development with Medium Density Residential homes. The 1993 General Plan land use map designates the property for Medium Density Residential (MDR), which is described as follows in the 1993 General Plan:

The MDR designation provides for single-family detached and attached homes, secondary residential units, public and semi-public uses, and similar and compatible uses. Residential densities shall be in the range of 5.1 to 12.0 dwelling units per gross

acre. The MDR designation is the predominant residential designation, occurring throughout large areas of the City. The wide distribution of this designation is intended to maintain a development pattern in newly developing areas that is consistent with historic development patterns.

As discussed later in this report, the proposed subdivision was submitted and accepted as a complete application (that is, ready for staff review and analysis) in 2011, when the 1993 St Helena General Plan was in effect. Although the 1993 General Plan was replaced in 2019 by the current General Plan (the "2019 General Plan"), the 1993 General Plan is used in this report because state law regulating the review of subdivision maps mandates the use of the Plan that was in place when an application was filed. A discussion of the proposed subdivision's consistency with the General Plan adopted in 2019 is included later in this report for informational purposes.

Zoning

At the time that application for the proposed subdivision was accepted as complete, the zoning for the site, as shown on the City's Zoning Map, was Medium Density Residential (MR). The current zoning designation is the same. The Zoning Map as it existed in 2011 and in its current form are both attached to this report.

The MR zoning district provides for single-family detached homes, accessory dwelling units, limited agricultural uses and compatible uses.

The Zoning Code (both at the time of application completeness and today) describes the MR zoning district as follows:

> *"The MR district is established for consistency with the medium density residential general plan designation. The district provides for single-family detached homes, accessory dwelling units, limited agricultural uses and compatible uses. Residential densities shall not be less than 5.1 dwelling units per acre nor more than sixteen (16) dwelling units per acre."* [Zoning Code 17.40.010]

Municipal Code Section 17.40.060 (Development Standards) establishes the standards for lots:

- Minimum lot area: 7,000 square feet
- Minimum lot width and frontage: 70 feet
- Minimum density: 5.1 units per acre

The parcels proposed for single-family residential lots range in size from 7,000 square feet to 12,814 square feet. All proposed lots meet the minimum depth and width requirement of 70 feet.

The MR district allows a minimum density of 5.1 dwelling units per acre up to a maximum of 16 dwelling units per acre. The Tentative Map would accommodate at least 87 units on a 16.9-acre site resulting in a proposed density of 5.15 dwelling units per acre in compliance with the MR district minimum density requirement.

All other applicable standards related to the siting and development of the proposed structures, including lot coverage, floor area ratio, and structure height and setbacks, will be reviewed for compliance when the proposed dwelling units are submitted to the City for design review and a conditional use permit (for the multi-family homes).

PROJECT PROCESSING HISTORY

2010: Application Submitted
On September 9, 2010, the applicants, Ben and Kelly Van Zutphen, applied to the City to subdivide an approximately 17-acre parcel of land in the eastern area of the city, east of the existing terminus of Adams Street. The proposed subdivision would create lots for 51 single-family homes and 11 accessory dwelling units, and a 52nd lot on which at least 25 multi-family housing units would be built. Several rounds of review and revisions transpired over the course of the next six months.

2011: Application Complete/1st EIR Process Begins
On March 25, 2011, a completeness letter was issued by the City to the applicants along with a request for additional information related to the existing well and site drainage. The Planning Commission held a "pre-scoping" meeting on July 19th to review the Initial Study and gather public comments. On August 6th, the Planning Commission held a second "pre-scoping" meeting and directed the Planning Department to issue a Request for Proposals (RFP) for the project's Environmental Impact Report. On December 6th, the Planning Commission held a public scoping meeting for the project EIR.
2012: Draft EIR #1 Released for Public Review

On March 19, 2012, the Notice of Preparation for the Draft EIR #1 was circulated. The Draft EIR was released on March 29th for public and agency review with the initial comment period scheduled to end on July 13th, then extended an additional 45 days to end on September 4th, with a Draft EIR public comment meeting held on August 28th.

2013: Planning Commission Considers Draft EIR #1

Urban Planning Partners (consultants contracted to prepare the Draft EIR) commenced preparation of responses to comments in January of 2013. On September 17, 2013, the Planning Commission considered certification of the Final EIR. The item was presented to the Planning Commission then continued to a future date but was not acted on.
Following the Planning Commission meeting and continuance of the item, additional information was submitted to the City that included a re-design of the intersection of Pope Street and the Silverado Trail. This re-design resulted in the requirement for additional CEQA analysis of the project EIR.
2014 - 2015

No significant progress was documented for the project or the project EIR in the years 2014 to 2015.

2016: Draft EIR #1 Revised
Urban Planning Partners completed revisions to the Draft EIR and resubmitted to the City in approximately the middle of 2016. DEIR revisions resulted in request for information regarding water use and affordable housing provisions for the Tentative Map. On October 3rd, City staff requested additional information and funding from the applicant. Staff met

with the applicant on December 20th to discuss the details of the request for additional information and funding.

2017: Draft EIR Consultant Quits; New EIR Consultant

On April 21, 2017, the project applicant provided some requested information but did not provide additional funding until May 2017. On May 19th, Urban Planning Partners declined to complete the project EIR and officially confirmed resignation on June 29th. City staff sent requests for consultation services to three planning consulting firms on the City's approved Master Services Agreement list. None of the firms replied to the request for services and on September 14th, the City issued a Request for Proposals soliciting proposals from qualified environmental consultants for the preparation of an EIR for the project. On December 12th, Dudek is contracted to complete the project EIR.

2018: Preparation of EIR #2 Begins/Revised Map and Info Submitted

On March 6, 2018, the city issued a new Notice of Preparation, and the public comment period is initiated, followed by a public scoping meeting held on March 12th. The public comment period ends on April 13th. On August 3rd, the applicant submitted a revised tentative map and supporting documentation, with the subdivision design remaining largely unchanged.

2019: Revised Map and Info Submitted

On February 1, 2019, the applicant submitted an updated tentative map, a proposed Affordable Housing Agreement, and additional technical studies. The applicant was contacted on September 4th and informed that further work on the project application and EIR will not commence until unpaid balances are remitted to the City. On November 26th, the City approved an augmented budget for Dudek to complete additional technical work for the project EIR following payment from the applicant.

2020: EIR Preparation Continues

On March 16th, augmentation of the Dudek budget was approved for the completion of a Vehicle Miles Travelled (VMT) study, General Plan Goals and Policies update, and Wildfire analysis to include in the project EIR.

2021: Draft EIR #2 Circulates for Public Review/Response to Comments Begins

On February 9, 2021, the Dudek budget was approved for augmentation again to include a second Administrative Draft EIR, second Screen-check DEIR, and Final EIR preparation. On April 27th, Interwest was contracted by the City to provide planning services and manage the processing of the project. The City held a public comment period on the second Draft EIR from September 23rd to November 8th (45 days); with the comment period later extended to November 30th (67 days total) due to the volume of comments received and requests for additional time from commenters. Dudek began preparation of responses to comments in December.

2022: Response to Comments on EIR #2 Continues/Staff Report Prepared

On April 12, 2022, Dudek requested additional funding to complete the project FEIR. The City prepared a Professional Service Agreement (PSA)to facilitate a sewer line capacity study on April 22nd in response to technical comments raised as part of the Draft EIR public review. The Staff Report package for Planning Commission is prepared for the November 1, 2022 meeting.

PROJECT DESCRIPTION

The proposed project being considered by the Planning Commission at this time is a Tentative Subdivision Map to subdivide an approximately 17-acre parcel of land in the eastern area of the city, east of the existing terminus of Adams Street. The proposed subdivision would create lots for 51 single family homes, and a separate parcel (lot 52) on which multi-family attached housing units would be built. The proposed Tentative Subdivision Map is included as Attachment 3 to this report.

The applicant proposes to include Accessory Dwelling Units (ADUs) with 11 of the 51 single family homes. The Commission should note that the applicant has not yet filed an application for any specific development project; this would be done after the approval of the tentative map and recordation of the Final Map (following approval of an Affordable Housing Agreement and compliance with other relevant tentative map conditions). Approval of the tentative subdivision map would only provide for the subdividing of the property; future applications would define the exact development that would take place on the lots created by the subdivision.

Including the ADUs, the project as currently envisioned by the applicant would have 87 homes, which is the minimum number of homes that can be built on the site per its existing General Plan and Zoning designations. A summary of the currently proposed residential units is shown below:

Single Family Homes:	51 units
Attached Multi-Family:	25 units
Accessory Dwelling Units:	11 units
TOTAL:	87 units

The overall residential density of the project, including all residential types, is 5.15 units per acre (87/16.9 = 5.15).

Each of the single-family lots would be at least 7,000 square feet in size, with larger corner lots and cul-de-sac lots.

As part of the first phase of construction, infrastructure to support the proposed project would be developed, including:

- Storm drain, and sanitary sewer facilities will be constructed per City standards. All lots have been designed to drain to the street.

- Per the General Plan Circulation Element, Starr Avenue will be extended through the project area across an existing City-owned parcel, and Adams Street will be extended eastward to connect with Starr. Internal roadways would be constructed. All streets have been designed according to the City standards. Starr Avenue and Adams Street will also include on-street bicycle lanes.

An existing well will be preserved on proposed Parcel B and connected to an on-site "purple pipe" water distribution system to provide all landscape irrigation and outdoor needs (car washing, etc.) throughout the project site. The well and onsite water system would be owned and maintained by a homeowners association.

The "panhandle" potion of Lot 52 will be landscaped and maintained by the property owner.

If the proposed Tentative Map is approved, prior to any construction occurring, the project will also require approval by the City Council of an Affordable Housing Agreement, Design Review approval by the Planning Commission for the proposed single-family homes and a Conditional Use Permit for the development of the proposed multi-family homes. These applications are not being considered at this time but will be submitted and reviewed at a future date. City Council approval of the Final Map is also required.

Also, a small portion of lot #51 (see Attachment 3) is located on City-owned property, currently intended as part of the right of way of Adams Street. A proposed condition of approval requires that this property be vacated and transferred to the applicant prior to recordation of the Final Map.

ANALYSIS

Tentative Maps are governed by Section 16.16 of the St Helena Municipal Code (SHMC), as well as the California Subdivision Map Act. Specifically, Sections 16.16.060 (Planning Commission action) and 16.16.070 (City Council action) require the proposed Map to be first presented to Planning Commission for review and recommendation to City Council.

Section 16.16.080(A) defines the findings that must be made for the Planning Commission to recommend approval of a tentative map. While there are a number of concerns that have been expressed by the community, a Tentative Map may only be denied if it is found to be inconsistent with the findings below (from Section 16.16.080 of the St Helena Municipal Code):

A. In recommending approval or conditional approval or in approving or conditionally approving a tentative map, the planning commission and city council shall find:

1. That the proposed subdivision, together with the provisions for its design and improvement, is consistent with the general plan, any applicable specific plan, and other applicable provisions of this code; and

2. *Except for condominium conversion projects where no new structures are added, that the design of the proposed subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in the subdivision, as described in the state Subdivision Map Act and any guidelines promulgated by the city council.*

In In addition, the proposed subdivision is a “housing development project” as defined by State law, and in recent years the State legislature has passed legislation that significantly restricts the grounds pursuant to which a housing development project can be denied. Specifically, Government Code Section 65589.5(j)(1) provides that if a housing development project complies with applicable *objective* general plan, zoning, and subdivision standards and criteria in effect at the time the application was deemed complete, the City may only deny the project if it finds, based on written findings supported by a preponderance of the evidence in the record that both of the following conditions exist:

1. The housing development project would have a specific, adverse impact upon the public health of safety unless the project is disapproved or approved upon the condition that the project be developed at a lower density. As used in this paragraph, a "specific, adverse impact" means a significant, quantifiable, direct, safety standards, policies, or conditions as they existed on the date the application was deemed complete.
2. There is no feasible method to satisfactorily mitigate or avoid the adverse impact identified pursuant to paragraph (1), other than the disapproval of the housing development project or the approval of the project upon the condition that it be developed at a lower density.

Other, more general policy considerations not related to these findings or to consistency with the General Plan (such as the other concerns expressed by the public) should not be cited in a recommendation to approve or deny the proposed subdivision.

The following sections describe staff's analysis of each of the findings required for approval of a tentative map, which staff recommends **can** be made.

1993 General Plan Consistency

Because the application for the proposed subdivision was deemed complete by the City in 2010, at a time when the City’s 1993 General Plan was in place, the 1993 General Plan was used to determine “… consistency with the general plan.”

Staff’s review of applicable policies from the 1993 General Plan is included as Attachment 4 to this staff report. Staff’s recommendation is that the proposed subdivision is **consistent** with all applicable 1993 General Plan policies.

Although consistency with the General Plan adopted in 2019 (the “2040 General Plan Update”) is not part of the determination of General Plan consistency, an analysis has been prepared by staff and is included as Attachment 5 to this staff report. The conclusion of staff’s analysis is that the proposed project is also consistent with the current (2019) General Plan.

Specific Plan Consistency

The proposed subdivision is not located in a Specific Plan area.

Zoning Code Consistency

For the purposes of the proposed subdivision map, consistency with "… other applicable provisions of this code" is determined by reviewing the map in relation to the density and lot standards for the MR zoning designation.

Other portions of the Zoning Code or the St Helena Municipal Code which deal more specifically with development projects (that is, the construction of homes and other structures) are not relevant to the consistency of the subdivision map, which is the only application being considered at this time. Those separate findings, where needed, would be made at the time subsequent applications are submitted to the City.

As noted earlier in this report, Municipal Code Section 17.40.060 (Development Standards) establishes the standards for lots in the MR zoning district:

- Minimum lot area: 7,000 square feet
- Minimum lot width and frontage: 70 feet
- Minimum density: 5.1 units per acre

Based on a review of the proposed subdivision, staff recommends that the map complies with and is consistent with these standards:

- All proposed residential lots[1] are at least 7,000 square feet in size
- All proposed residential lots are at least 70 feet in width
- The overall density of the project, including the proposed 25 multi-family homes on Parcel 52 and the proposed 11 accessory dwelling units, is 5.15 units per acre, which meets the minimum required density.

(1. Non-residential lots, such as the lot containing the existing well, are not subject to the minimum standards and are not included in this analysis.)

Design for Passive or Natural Heating or Cooling

This standard is described as follows in the State of California Subdivision Map Act:

> *(b) (1) Examples of passive or natural heating opportunities in subdivision design, include design of lot size and configuration to permit orientation of a structure in an east-west alignment for southern exposure.*
>
> *(2) Examples of passive or natural cooling opportunities in subdivision design include design of lot size and configuration to permit orientation of a structure to take advantage of shade or prevailing breezes.*
>
> *(c) In providing for future passive or natural heating or cooling opportunities in the design of a subdivision, consideration shall be given to local climate, to contour, to configuration of the parcel to be divided, and to other design and improvement requirements, and that provision shall not result in reducing allowable densities or the percentage of a lot that may be occupied by a building or structure under applicable planning and zoning in effect at the time the tentative map is filed. [CA Govt Code section 66473.1]*

Based on an analysis of the proposed subdivision, staff recommends that the map provides, to the extent feasible, opportunities for passive or natural heating or cooling, as discussed below.

- Approximately 40 of the proposed lots would allow a house oriented in an east-west configuration, allowing these homes, if properly designed, to take advantage of solar exposure.
- Approximately 40 of the proposed lots would allow for homes oriented so that, if front and rear doors and windows were opened, the prevailing upvalley breeze would provide for natural cooling.
- There is no existing shade on the property, but future homes would be required to install landscaping, including trees that would provide shade.

CEQA

A Notice of Preparation of a Draft Environmental Impact Report (SCH# 2018032014) was prepared and available for public review and comment during the state-mandated 30-day public review period from March 6, 2018, through April 9, 2018. A public scoping meeting was held on March 12, 2018. Concerns raised from public agencies and the public include impacts to the property from potential flooding, traffic and circulation impacts, increased water demand, and impacts to cultural resources.

A Draft EIR was prepared with a 45-public review period beginning on September 23, 2021 and ending on November 8, 2021. Due to the volume of comments, the public review period was extended to November 30, 2021 for a total of 67 days.

The Draft EIR is included as Attachment 6 to this report. The proposed Final EIR, which includes comments on the Draft EIR and responses to comments, is included as Attachment 7. The Mitigation Monitoring and Reporting Program is included in the Resolution in Attachment 1.

Topics Addressed in the Draft EIR

The Draft EIR discusses the project's impacts associated with the following topics.

The Draft EIR's conclusions are discussed later in this report; conclusions of the EIR about the significance of impacts for each topic are shown below.

- Aesthetics (Potentially Significant, but mitigation available)
- Agriculture and Forest Resources (Less than Significant)
- Air Quality (Less than Significant)
- Biological Resources (Potentially Significant, but mitigation available)
- Cultural and Tribal Resources (Potentially Significant, but mitigation available)
- Energy (Less than Significant)
- Geology and Soils (Potentially Significant, but mitigation available)
- Greenhouse Gas Emissions (Less than Significant)
- Hazards and Hazardous Materials (Potentially Significant, but mitigation available)
- Hydrology and Water Quality (Less than Significant)
- Land Use and Planning (Less than Significant)
- Mineral Resources (Less than Significant)

- Noise and Vibration (Potentially Significant, but mitigation available)
- Population and Housing (Less than Significant)
- Public Services (Less than Significant)
- Recreation (Less than Significant)
- Traffic and Transportation (Significant and Unavoidable)
- Tribal Cultural Resources (Less than Significant)
- Utilities and Service Systems (Less than Significant)
- Wildfire (Less than Significant)

Alternatives Considered

The EIR evaluated four Alternatives in addition to the proposed project. The four alternatives (described in detail in the Draft EIR) are:

- Alternative 1) No Project/No Development Alternative, described in the Draft EIR as, "*… the Proposed Project would not be approved or constructed. Under this alternative, the Project site would retain its current land use designation and zoning consistent with both the 1993 General Plan and the City's current 2019 General Plan.*

- Alternative 2) No Project/General Plan, described as, *"… the Project would be developed consistent with the underlying MDR land use designation and MR zoning which allows development of the Project site with residential uses up to a maximum density of 12 dwelling units/acre (du/ac) under the 1993 General Plan MDR designation which was revised to 16 du/ac under the 2019 General Plan consistent with the MR zoning, which permits a maximum density of 16 du/ac. For the purposes of this alternative a density of 9 du/ac was assumed for a total of 152 single-family residential units."*

- Alternative 3) Park/Open Space Preserve Alternative, described as, *"… includ[ing] an approximately 1-acre park/open space that would preserve a majority of the on-site wetlands to help lessen impacts to seasonal wetlands … To accommodate the park three lots would need to be removed … and vegetated swales to capture runoff would be located adjacent to developed areas. … The remaining approximately 16-acres would be developed with approximately the same number of residential units as the Proposed Project and would maintain a density of 5.1 du/ac."*

- Alternative 4) Increased Density/Affordable Housing Alternative, which "*... includes the approximately 1-acre park to preserve a majority of the on-site seasonal wetlands with the remaining approximately 16-acres designated for up to 180 affordable housing units, assuming a density of 11.3 dwelling units per acre (du/ac) … The units would be attached housing (duplex or triplex) and would be 100% affordable."*

The alternatives are described in detail and analyzed in Chapter 5 of the Draft EIR.

Based on the analysis in the Draft EIR, Alternative 1, the No Project Alternative, would result in the fewest environmental impacts, and is the "environmentally superior alternative." However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Of the alternatives evaluated, Alternative 3, the Park/Open Space Preserve alternative is the environmentally superior alternative. However, according to the Draft EIR, "… this alternative would not avoid all of the significant impacts associated with the Project and all of the identified mitigation would still be required."

Potentially Significant Impacts

Impacts of potential significance requiring mitigation were identified in the following areas:

- Aesthetics
- Biological Resources
- Cultural and Tribal Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Noise and Vibration

The Draft EIR concluded that mitigation was available to reduce all of these impacts to a level of Less Than Significant.

A summary listing of all potentially significant impacts and their associated mitigation measures is included in the Executive Summary in the Draft EIR (Attachment 6 to this staff report). Detailed discussions of impacts and mitigation are provided in Section 3 of the Draft EIR.

Significant and Unavoidable Impact: Vehicle Miles Traveled

Based on the analysis in the Draft EIR, impacts related to Transportation and Traffic (specifically, Vehicle Miles Traveled or "VMT") were found to be significant and unavoidable. This impact relates to the number of miles that will be traveled in motor vehicles by persons living in the proposed subdivision (trips to work, school, shopping, etc.). This impact is discussed in detail in Section 3.14 of the Draft EIR.

State law, effective January 1, 2020, requires the local agencies examine this impact and that the impacts of a proposed project on roadway congestion (historically, the standard used by most California cities and counties) is no longer included in an EIR. (The traffic congestion impacts of the proposed project were examined, but for purposes of determining consistency with General Plan congestion policies, this analysis is not included in the Draft EIR.)

The state's intent in requiring that VMT be projected is to focus efforts statewide on reducing unnecessary vehicle travel, generally by locating homes closer to jobs, shopping, and other daily needs, and by increasing the use of public transit, walking, and bicycling. As discussed in the Draft EIR, reductions in VMT for residential projects like the proposed project in semi-rural areas are difficult to achieve.

Compared to a commercial development, which could implement ride-sharing programs, residential projects have few options available to effectively reduce vehicle travel; none are available to reduce VMT for the Hunter subdivision enough to reduce this impact to a level of Less Than Significant.

For this reason, the Draft EIR concluded that this impact is Significant and Unavoidable.

Statement of Overriding Considerations

State law provides a means for the approval of a project which is identified to have one or more significant impacts. To do so, the local agency must adopt a Statement of Overriding Considerations which provides the reasons why the agency feels that the benefits of the project outweigh (or "override") the potential impacts. A Statement of Overriding Considerations has been prepared (included in Attachment 1 to this report) which provides the following reasons why approving the project is appropriate:

1. The Project provides needed housing to the City, particularly affordable housing.
2. The City, per the adopted 2015 Housing Element, has a jobs to housing ratio above the County average, indicating a need for additional housing. As of the most recent Housing Element Progress Report (April 2022), the City had not met its regional housing needs allocation for very-low or moderate income housing.
3. The Project would implement the City's General Plan. The Project site is identified as a housing site in the City's current General Plan, the current Housing Element, and the previous two iterations of the City's General Plan.
4. The significant and unavoidable impact is related to VMT. Ultimately VMT per capita will be reduced by providing necessary housing in jurisdictions with a high number of jobs. As stated previously, the City of St. Helena currently has a jobs housing imbalance which the Project will help address.
5. The Project will pay development fees which will assist in needed infrastructure improvements in the City, including wastewater treatment and collection systems.
6. The Project would construct the extension of Starr Avenue and the partial extension of Adams Street consistent with the General Plan Circulation Element.

The Statement of Overriding Considerations concludes,

> *The City Council hereby declares that the foregoing benefits provided to the public through the approval and implementation of the Project outweigh the identified significant adverse environmental impact of the Project that cannot be mitigated. The City Council finds that each of the Project benefits separately and individually outweighs all of the unavoidable adverse environmental effects identified in the EIR and therefore finds those impacts to be acceptable.*

Public and Agency Comments on the Draft EIR

A total of 121 Draft EIR comment letters were received from the 2021 public review and Response to Comments were prepared and included in the Final EIR. Notification of the availability of the Final EIR was sent to the agencies, organizations, and individuals that provided comments. Topics addressed in the comments include:

- Concern about the capacity of downstream sewer lines to accommodate additional flows generated by the project.
- Concern about the "high density" of the proposed project.
- Concern about the loss of open space and the ability to walk on informal trails located on the project site.
- Concern about projected water use and the ability of the project to feasibly comply with the City's water neutrality requirement.
- Concern about future traffic congestion and traffic safety impacts (including for children walking to school).
- Concern about the project's impact on the ability of residents in the Vineyard Valley mobilehome community to evacuate in the event of an emergency.
- Concern about the ability of the City-constructed levee on the Napa River (built to protect the Vineyard Valley mobilehome community from flooding) to protect new homes in the proposed project.
- Concerns about changes to the appearance of the project site when existing open space and vines are replaced with a suburban neighborhood.
- Concerns about the project's effect on the City's plans to construct a new roadway connection to the Silverado Trail.

  Responses to all of the comments received during the public review period are included in the Final EIR and Responses to Comments, Attachment 7 to this staff report.

Based on thorough review of the comments by City staff, legal counsel, and the EIR consultant, none of the comments or responses raised any issues which would require recirculation of the Draft EIR. Attachment 7 includes a list of minor errata changes to the Draft EIR which were included in the responses to comments.

Mitigation Monitoring and Reporting Plan

A Mitigation Monitoring and Reporting Program was prepared for the potential impacts that require mitigation and is contained in the Executive Summary, Section ES.6 of the Draft EIR. Findings for Certification of the Environmental Impact Report and adoption of the Mitigation Monitoring and Reporting Program, and approval of Tentative Map File # PL10-040 are contained in the Resolution prepared for this project.

OTHER PROJECT ISSUES

Based on public input and prior review of the project, the following are issues of concern to the public, but not necessarily related to the approval at hand.

- Water Neutrality
- Trail/Open Space
- Levee/Flooding
- Parking
- Aesthetics
- Sewer Capacity
- “High Density” Nature of the Project
- Traffic/Congestion
- Intersection Design Adams Street/Starr Avenue and Starr Avenue/Street A
- Vacation of City Property

These issues are discussed below.

Water Neutrality

The issue of Water Neutrality and the project’s ability to comply with the City’s requirement for no net increase in demand for domestic water, is addressed in detail in Master Response #2 to the comments on the Draft EIR.

In summary, the Draft EIR concluded that a variety of measures (detailed in Appendix J to the Draft EIR) are available that would either decrease water demand or increase the efficiency of the City’s water system so that the additional demand created by the proposed project would be offset and overall citywide demand would not increase. The Master Response also notes that the use of the onsite water well for irrigation and other outdoor uses is part of the overall strategy to reduce water demand for the project.

A condition of approval is also included requiring the applicant to identify and implement specific water system improvements to achieve water neutrality prior to issuance of any building permits.

Trail/Open Space

Many commenters expressed concern about how the project would affect their ability to use the portion of the existing public Napa River Trail system adjacent to the project site.

As noted in the responses to comments on the Draft EIR on this topic, the Final EIR includes this statement:

> *The Project does not propose removing the existing trail or levee maintenance road, as explained in Section 3.12, Public Services and Recreation on page 3.12-17 and on page 2-23 in Chapter 2, Project Description.*

The trail system is located entirely outside of the proposed project and would not be affected by the proposed project. An illustration of the existing trail in relation to the proposed subdivision is included as Attachment 14 to this staff report.

Levee/Flooding

Many commenters expressed concern about various issues associated with the City-constructed levee adjacent to the project site. These include:

- Questions about the engineering standards and requirements used to design and construct the levee.
- Whether the levee was constructed or inspected by the U.S. Army Corps of Engineers.
- Whether the levee would adequately protect the project site.
- Whether the capacity of the City-owned flood basin adjacent to the project site would be affected by the proposed project to the extent that its capacity would be exceeded.
- Whether the City is properly maintaining the levee, including controlling rodents whose burrows could affect the integrity of the levee.
- Whether climate change could cause changes in flooding that would affect the ability of the levee to protect the project site.

Detailed responses to these concerns are provided in Master Response #3 to comments on the Draft EIR. Very brief summaries of the more detailed information in the Master Response include:

- The levee was designed and built by the City to meet US Army Corps of Engineers (USACOE) standards. Numerous levees throughout the US are built by local agencies in the same; not all levees are built by the USACOE.
- The levee was designed to provide protection from a “200-year” flood on the Napa River (a flood event which would be expected to occur once every 200 years, or with a 1-in-200 chance of occurring in any given year). This exceeds the usual 100-year standard.
- The adjacent flood basin was designed to accommodate storm flows from the subdivision, and assumed more paved and developed area (and, therefore, more storm flows) than would be expected from the project as now proposed. The basin can handle storm flows from the proposed project.
- The City is properly maintaining the levee, including rodent control. Maintenance records are available online and at city hall.
- Because the levee was designed to accommodate a more severe flooding event than required (200-year vs 100-year), future increases in storm flows in the Napa River (if they occur as a result of climate change) would be handled better than if the levee were designed to minimum 100-year standard.

Parking

Several commenters expressed concern that the new homes in the subdivision would cause parking on local streets to increase. While the responses to the comments from the perspective of the Draft EIR note that parking is not a CEQA issue which needs to be examined in the environmental document, staff offers the following responses from a planning perspective:

- Any development which takes place in the subdivision will be subject to detailed review to ensure that City parking standards are met. These include required parking for single and multi-family homes, both of which require a combination of covered and uncovered onsite parking.
- Parking on public streets is available to anyone; except where specifically signed, the City does not limit parking on public streets in the vicinity of the proposed subdivision.
- Because the project does not contain any features that would tend to attract large numbers of people on a regular basis, staff does not foresee any unusual increases in on-street parking in the vicinity as a result of the proposed project.

Aesthetics

Many commenters expressed concern about the change in appearance of the project site that would occur if homes replaced the existing open fields and vines.

The Draft EIR examines impacts to aesthetics in detail in section 3.1, “Aesthetics/Visual Resources.” A brief summary of the Draft EIR’s conclusions:

- The St Helena General Plan does not designate any specific views that are to be protected, but does provide general policies which seek to, “… [protect] views from streets, parks, and open spaces to vineyards, agriculture, and hillsides.”
- The proposed project orients its major streets so that views of surrounding hillsides and open space areas will be retained.
- Future development will be reviewed through the Development Review process, at which time specific home designs and placements will be reviewed by City staff and the Planning Commission to ensure that it complies with City standards.

Sewer Capacity

Many commenters expressed concern about the impact of the proposed project on the capacity of sewer lines downstream of the project, and especially in the Vineyard Valley mobilehome community, where the existing sewer system occasionally overflows during heavy rains (when rainfall essentially “leaks” into the City’s sewer system and therefore increases flows and causes overflows).

This issue is examined in detail in Master Response #4 in the Final EIR, which includes the results of a detailed analysis of sewer capacity. A summary of the detailed Master Response #4:

- Due to the unwanted infiltration of rainwater into the sewer system during storms, the capacity of the sewer lines downstream of the project is occasionally exceeded, causing overflows. This is referred to a “Peak Wet Weather Flows” or “PWWF.”
- During dry weather, flows in the sewer lines do not include rainwater, and the capacity of the lines is not exceeded.
- This lack of capacity during PWWF conditions is known to the City, and a future increase in the size of a sewer line downstream of the proposed subdivision has been identified to correct this problem.
- During dry weather conditions, there is sufficient capacity in the downstream sewer line to accept flows from the proposed project without overflowing.
- During PWWF conditions, flows from the proposed project would represent 0.5% of the flows in the line. While overflows can be expected in the downstream line until improvements are constructed, adding flows from the proposed project would not increase either the number or the severity of the overflows.
- Capacity is available at the City’s sewage treatment plan to handle flows from the proposed project.

The proposed project, the EIR concludes, would not have an adverse impact on the City’s sewer system.

“High Density” Nature of the Project

Several commenters expressed concern about placing a “high density” residential project adjacent to the existing Vineyard Valley mobilehome community. These commenters were apparently opposed to the project.

Staff notes that the Vineyard Valley community, with an overall density of approximately 5.4 dwelling units per acre (based on a review of aerial photography), is slightly more dense (a “higher density”) than the proposed subdivision (5.1 dwelling units per acre).

As noted earlier in this report, the proposed project is at the lowest allowable density in the Medium Density Residential land use category, which ranges from 5.1-12.0 units per acre (1993 General Plan) and 5.1-16.0 units per acre (2019 General Plan).

Based on staff’s analysis, the commenters who expressed concern about a “high density” project are expressing an opinion that is not supported by the actual project density. These commenters may be supporting a lower planned density of development for the project site, but this is not an issue which is before the Planning Commission at this time.

Traffic/Congestion

Many commenters expressed concern about increased traffic congestion as a result of the proposed project. While this impact is not examined the Draft EIR (because changes in state environmental law have removed discussion of traffic congestion from environmental documents), the traffic analysis prepared for the proposed project included an analysis of traffic and congestion impacts.

A brief summary of the results of the traffic analysis is provided in Attachment 15 to this report. The full text of the analysis is in Appendix K to the Draft EIR (Attachment 6 to this report).

Intersection of Adams Street/Street A/Starr Avenue

During staff's review of the proposed subdivision, concerns were expressed that because the intersections of Adams Street/Starr Avenue and Starr Avenue/Street are relatively close to each other, drivers could face difficulties negotiating the combination of these intersections. A modified design was developed that would end Street A at a cul-de-sac which would be open only to emergency vehicles, eliminating one of the intersections and simplifying the traffic movements.

However, a review of the City's roadway standards concluded that there is no clearly defined objective standard for intersection spacing, and that the proposed design meets all of the City's roadway design standards.

Therefore, staff did not recommend that the subdivision be revised to include the alternative roadway design (a cul-de-sac at Starr Ave/Street A).

Vacation of City Property

A small portion of proposed Lot 51 (at the southwest corner of Adams Street and Starr Avenue) is located on City-owned property which is currently proposed as part of the future right-of-way of Adams Street. This has been reviewed and found to be acceptable by the Public Works department (the portion of Lot 51 is not needed as future right-of-way), but approving the lot as proposed will require that the City vacate this property.

A proposed condition of approval is included to require the applicant to take appropriate steps to transfer this piece of City property to the applicant.

2019 GENERAL PLAN CONFORMANCE

An analysis of the proposed project's conformance with applicable policies of the current 2019 St Helena General Plan is included as Attachment 5 to this staff report. Based on staff's analysis, the project conforms with all applicable policies, including the proposed type and density of residential density proposed.

Note: As discussed earlier in this report, the 1993 St Helena General Plan, which was in effect at the time the application for the proposed subdivision was accepted as complete in 2011, is used in the official determination of consistency with the "General Plan." The analysis of conformance with the current 2019 General Plan is provided for informational purposes only.

ISSUES

Project issues include the significant and unavoidable impacts, public comments received in the Draft EIR, and other issues not related to the approval of the tentative map, as noted above.

CORRESPONDENCE

At the time of the preparation of the staff report, no correspondence has been received other than comments on the Draft EIR as noted above and in the project FEIR.

STAFF RECOMMENDATION

For the reasons described above, staff recommends that the Planning Commission:

1. Recommend that the City Council adopt the attached Resolution recommending certification of the Final EIR, approval of the Mitigation Monitoring Program, Findings of Fact and Statement of Overriding Considerations; and
2. Recommend that the City Council adopt the attached Resolution recommending approval the requested Tentative Map No. 2022-001, File #PL10-040 for the Hunter Subdivision project.

ATTACHMENTS

1 Hunter FEIR PC Reso 10-18-22
2 Subdivision PC Reso 10-20-22
3 Proposed Tentative Map
4 1993 General Plan Consistency Analysis
5 2019 General Plan Consistency Analysis
6 Hunter Draft EIR and Appendices
7 Final EIR and Response to Comments 10-18-22
8 Project Site Location Map
9 Project Site Aerial Photo 2022
10 1993 General Plan Land Use Map
11 2000 Zoning Map
12 2018 Zoning Map
13 Project Site Aerial Photo Oct 2009
14 Trail System Map
15 Hunter Subdivision Traffic Analysis Summary 10-10-22

PLANNING COMMISSION RESOLUTION NO. XXXX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ST, HELENA RECOMMENDING THAT THE CITY COUNCIL OF ST. HELENA, CERTIFY THE ENVIRONMENTAL IMPACT REPORT (STATE CLEARINGHOUSE # 2018032014) FOR THE HUNTER SUBDIVISION PROJECT; ADOPT FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT; ADOPT A STATEMENT OF OVERRIDING CONSIDERATIONS; AND ADOPT A MITIGATION MONITORING AND REPORTING PROGRAM.

WHEREAS, the proposed Hunter Subdivision Project, Tentative Map 2022-001 ("Project") entails the subdivision of a 16.9 acre site (Assessor's Parcel No. 009-030-057; hereinafter, the "Project site") in the City of St. Helena ("City") into 51 lots to accommodate single-family residences, a 3.4-acre parcel that would accommodate 25 attached residential units (which would be income restricted, with 5 units affordable to very low-income families, and 20 to moderate income families), a 0.06-acre parcel that would not be developed, and a 0.04-acre parcel for an existing agricultural well, which sill supply water for all onsite landscaping and other outdoor uses; and

WHEREAS, the proposed Project would result in the development of 87 residential units—51 single-family residences, accessory dwelling units ("ADUs") on 11 of the single family lots, and 25 attached residential units—resulting in an average density of 5.1 dwelling units per acre; and

WHEREAS, the proposed Project further includes grading of the Project site, construction of the extensions of Starr Avenue and Adams Street, construction of local residential streets, and installation of utility lines; and

WHEREAS, the proposed Project requires discretionary approvals from the City, including a Tentative Subdivision Map Approval (insert TSM No. 2022-001) and future discretionary approvals including an Affordable Housing Agreement, design review, and a conditional use permit, all of which must be obtained before development of the proposed Project may proceed;

WHEREAS, pursuant to Public Resources Code section 21067 of the California Environmental Quality Act (Pub. Resources Code, § 21000, *et seq.*) ("CEQA") and section 15367 of the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000, *et seq.*), the City is the lead agency for the proposed Project; and

WHEREAS, pursuant to CEQA and the State CEQA Guidelines, the City determined that an Environmental Impact Report ("EIR") should be prepared in order to analyze all potential adverse environmental impacts of the proposed Project; and

WHEREAS, the City issued a Notice of Preparation ("NOP") for the Draft EIR that provided for a comment period of over 30 days, from March 6, 2018 to April 9, 2018, and the NOP was sent to each responsible agency, trustee agency, the Office of Planning and Research ("OPR"), and interested parties, including members of the public who had requested such notice; and

WHEREAS, the City held a public scoping meeting on March 12, 2018 to further solicit comments on the scope of the Draft EIR; and

WHEREAS, the City initiated a 45-day public review and comment period for the Draft EIR, issuing a Notice of Availability and releasing the Draft EIR for public review and comment from September 23, 2021 through November 8, 2021; and

WHEREAS, pursuant to State CEQA Guidelines section 15086, the City consulted with and requested comments from all responsible and trustee agencies, other regulatory agencies, and others during the 45-day public review and comment period; and

WHEREAS, the City received a total of 122 letters during the 45-day public review and comment period, including 2 letters from interest group organizations, and 120 letters from individual members of the public; and

WHEREAS, the City held two public meetings, on November 2, 2021, and November 30, 2021, to further solicit public comments on the Draft EIR; and

WHEREAS, the City has prepared a Final EIR, consisting of the comments received during the 45-day public review and comment period on the Draft EIR, written responses to those comments, and revisions to the Draft EIR. For the purposes of this Resolution, the "EIR" shall refer to the Draft EIR, as revised by the Final EIR, together with the other sections of the Final EIR; and

WHEREAS, the EIR prepared in connection with the Project identified, discussed and sufficiently analyzed significant effects which may occur as a result of the Project, feasible mitigation measures necessary to avoid or substantially lessen the Project's potential environmental impacts and a range of feasible alternatives capable of eliminating or reducing any of these effects in accordance with CEQA and the State CEQA Guidelines; and

WHEREAS, all of the findings and conclusions made by the Planning Commission pursuant to this Resolution are based upon the oral and written evidence presented to it as a whole and not based solely on the information provided in this Resolution; and

WHEREAS, prior to taking action, the Planning Commission has heard, been presented with, reviewed and considered all of the information and data in the administrative record, including the Draft EIR, the Final EIR; and

WHEREAS, the Planning Commission has reviewed and considered as well as the City Council's draft CEQA findings, draft Statement of Overriding Consideration, attached hereto as **Exhibit A**, and the draft Mitigation Monitoring and Reporting Program ("MMRP") attached hereto

as **Exhibit B**, and all oral and written evidence presented to it during all meetings and hearings; and

WHEREAS, the EIR reflects the independent judgment of the City and is deemed adequate for purposes of making decisions on the merits of the Proposed Project; and

WHEREAS, all other legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY ST. HELENA DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1: The Planning Commission finds:

(a) That it has reviewed and considered the EIR and that the EIR fully complies with CEQA and the State CEQA Guidelines; and

(b) That the EIR reflects the independent judgment and analysis of the City

SECTION 2: Based on the aforementioned findings, the Planning Commission does hereby recommend that the City Council certify the EIR, adopt the CEQA findings, the Statement of Overriding Considerations, and the MMRP**.**

SECTION 3: The documents and materials that constitute the records of proceedings on which this Resolution has been based are located at the City of St. Helena City Hall at 1572 Railroad Ave. St. Helena, CA. The custodian for these records is the City of St. Helena City Clerk. This information is provided in compliance with Public Resources Code Section 21081.6.

SECTION 4: The Secretary shall certify to the adoption of this resolution.

ADOPTED AND APPROVED the 1st day of November, 2022.

PLANNING COMMISSION CHAIRMAN

I hereby certify that the foregoing is a true copy of a resolution adopted by the Planning Commission of the City of St. Helena at a regular meeting thereof held on the 1st day of November, 2012 by the following vote of the Planning Commission:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____

PLANNING COMMISSION SECRETARY

EXHIBIT A: DRAFT FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS

SECTION 1. FINDINGS REGARDING LESS THAN SIGNIFICANT IMPACTS NOT REQUIRING MITIGATION

Consistent with Public Resources Code section 21002.1 and State CEQA Guidelines section 15128, the EIR focused its analysis on potentially significant impacts, and limited discussion of other impacts for which it can be seen with certainty that there is no potential for significant adverse environmental impacts. State CEQA Guidelines section 15091 does not require specific findings to address environmental effects that an EIR identifies as "no impact" or a "less than significant" impact. Nevertheless, the City Council hereby finds that the Project would have either no impact or a less-than-significant impact to the following resource areas:

A. AESTHETICS

1. Scenic Vistas

Threshold: Would the Project have a substantial adverse effect on a scenic vista?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.1-24 through 3.1-26.)

Explanation: The City's 1993 General Plan and the City's recently adopted 2019 General Plan do not designate any specific scenic resources or vistas within the City for protection, and so the Project will not have a substantially adverse effect on any designated scenic vista. Moreover, the Project has been designed to protect views of the surrounding hillsides and open space areas through the orientation of Starr Avenue and Adams Street, and the Project site itself does not include highly valued landscape and is not considered a scenic vista. For these reasons and the reasons discussed in the EIR, the Project would not have a substantial adverse effect on a scenic vista. (Draft EIR, pp. 3.1-24 through 3.1-26.)

2. Scenic Resources within a State Scenic Highway

Threshold: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Findings: No impact. (Draft EIR, p. 3.1-24.)

Explanation: The Project would not substantially damage scenic resources within a state scenic highway because there is no state highway that would be impacted by the Project. The Project site is located approximately 0.2 miles from SR 29, an eligible state scenic highway, but the Project site is not visible from the highway due to intervening trees, buildings, and structures. The Project site does not contain any scenic resources such as rock outcroppings, does not contain any other significant natural or historical features that are visible from a state scenic highway, and, accordingly, would not limit view of such features from SR 29 or any other state scenic highway. For these reasons and the reasons discussed in the EIR, the Project would not substantially damage scenic resources within a state scenic highway. (Draft EIR, p. 3.1-24.)

3. Existing Visual Character of the Site and Surrounding Area

Threshold: Would the Project conflict with applicable zoning and other regulations governing scenic quality or substantially degrade the existing visual character or quality of public views of the site and its surroundings?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.1-26 through 3.1-34.)

Explanation: The Project will comply with the City's Design Review Ordinance and undergo design review to ensure that the Project is visually consistent and compatible with the applicable General Plan, with adjacent buildings, and with the existing environment. Additionally, the Project will comply with the site's zoning requirements, including requirements relating to building height and mass. For these reasons and the reason set forth in the Draft EIR, the Project would not conflict with applicable zoning or other regulations governing scenic quality. (Draft EIR, pp. 3.1-26 through 3.1-27.)

Additionally, the Project will not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Views of the site are limited and primarily available from private property (i.e., backyards), at the terminus of Starr Avenue and Adams Street, along Del Rio Court (a private street) within the immediate vicinity of the site, and from a gravel maintenance road bordering the north/northwest boundary of the site used by the public as a walking trial. (Draft EIR, p. 3.1-27.) Visual simulations in the Draft EIR illustrate the fact that the Project will not substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Draft EIR, pp. 3.1-29, 3.1-21.) For these reasons and the reasons set forth in the EIR, the Project will have a less-than-significant effect relating to this issue, and no mitigation is required. (Draft EIR, pp. 3.1-26 through 3.1-34.)

B. AGRICULTURE AND FORESTRY RESOURCES

1. Farmland Conversion

Threshold: Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Finding: Less-than-significant impact. (Draft EIR, p. 3.2-12.)

Explanation: While the Project site does include 5.8 acres of Prime Farmland and 0.6 acres of Farmland of Statewide importance that would be converted to urban uses as a result of the Project, the Project would have a less-than-significant impact relating to this issue. The California Land Evaluation and Site Assessment ("LESA") model—a model designed to ensure a quantitative and consistent approach to determining potentially significant impacts to agricultural resources—was used to assess the Project's impact on agricultural lands. Based on the LESA assessment which evaluated the soil resource quality, project size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands the quality of agricultural lands on the

Project site were found to be low quality and did not meet the standard to be considered significant agricultural resources. (Draft EIR, pp. 3.2-9-3.2-10.)As set forth in the EIR, the Project's impacts associated with the removal of prime farmland and farmland of statewide importance would be less than significant. (Draft EIR, p. 3.2-12.)

2. Agricultural Zoning

Threshold: Would the Project conflict with existing zoning for agricultural use, or with a Williamson Act contract?

Finding: Less-than-significant impact. (Draft EIR, pp. 3.2-11.)

Explanation: The Project site is not under a Williamson Act contract and does not include any land zoned for agricultural use. (Draft EIR, pp. 3.2-6, 3.2-11.) There are agriculturally zoned lands to the north and northwest of the Project site. The Project would not directly or indirectly affect lands to the north and northwest such that continued agricultural use would be impaired. . Notably, the development of residences on the Project site would not directly or indirectly result in conversion of the agricultural land to the north and northwest of the Project site to non-agricultural uses. The City's Municipal Code (Chapters 17.32 through 17.60 and 17.68) includes provisions that require property owners adjacent to agricultural operations to recognize that adjacent properties have the right to farm and that there is a good faith expectation that the adjacent neighbors will not complain to the City regarding legal normal agricultural activities, including day or night disbursement of chemicals, and creation of dust, noise, or fumes. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.2-11 through 3.2-13.)

3. Forestland Zoning

Threshold: Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

Finding: No impact. (Draft EIR, pp. 3.2-6, 3.2-11.)

Explanation: The Project site does not contain any forest or timberland and is not zoned for forest land, timberland, or timberland production. (Draft EIR, pp. 3.2-6, 3.2-11.)

4. Loss of Forest Land

Threshold: Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

Finding: No impact. (Draft EIR, pp. 3.2-6, 3.2-11.)

Explanation: The Project site does not contain forest land and is not designated as forest land. (Draft EIR, pp. 3.2-6, 3.2-11.)

5. Indirect Conversion

Threshold: Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Finding: Less-than-significant impact. (Draft EIR, pp. 3.2-12 through 3.2-13.)

Explanation: While there is agricultural land to the north and northwest of the Project site that is currently in active agricultural production, the Project would result in physical changes to the environment that would . directly or indirectly result in a conversion of this farmland to non-agricultural use. In addition, the City's Municipal Code includes provisions that require property owners adjacent to agricultural operations to recognize that adjacent properties have the right to form and that there is a good faith expectation that the adjacent neighbors will not complain to the City regarding legal normal agricultural activities, including day or night disbursement of chemicals, and creation of dust, noise, or fumes. As noted above, the Project would not convert forest land to non-forest use, as there is no forest land on the Project site. For these reasons and the reasons set forth in the EIR, the Project would have no impact to farmland or forest land. (Draft EIR, pp. 3.2-12 through 3.2-13.)

C. AIR QUALITY

1. Air Quality Management Plan Consistency

Threshold: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.3-28 through 3.3-31.)

Explanation: The Bay Area Air Quality Management District ("BAAQMD") has set forth a three-step methodology for determining a project's consistency with the applicable air quality plan. The EIR engaged in this three-step process and concluded based on substantial evidence that the Project would support the goals of the applicable air quality plan (the 2017 Clean Air Plan), that the Project complies with applicable control measures from the applicable air quality plan, and that the Project would not disrupt or hinder implementation of any control measures from the applicable air quality plan. As part of this analysis, the EIR demonstrated the Project would result in less than significant construction and operational emissions and would not result in long-term adverse air quality impacts. For these reasons and the reasons set forth in the EIR, the Project would not conflict with or obstruct implementation of the applicable air quality plan and would thus have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.3-28 through 3.3-31.)

2. Criteria Pollutant Emissions

Threshold: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.3-31 through 3.3-36.)

Explanation: The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region, the San Francisco Bay Area Air Basin ("SFBAAB"), is in non-attainment under applicable federal or state ambient air quality standards. BAAQMD has developed thresholds of significance to determine whether a project's individual emissions would be cumulatively considerable. The EIR estimated the Project's emissions relating to both construction and operation using the CalEEMod model and concluded, based on substantial evidence, that the Project would not result in a cumulatively considerable net increase of any criteria pollutant (including ROG, NO_x, PM_{10}, and $PM_{2.5}$) for which the SFBAAB is in non-attainment. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.3-31 through 3.3-36.)

3. Sensitive Receptors

Threshold: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.3-36 through 3.3-37.)

Explanation: The Project would not generate substantial criteria air pollutant emissions or associated pollutant concentrations, as construction and operation of the Project would not exceed the BAAQMD significance thresholds for ROG, NO_x, PM_{10}, and $PM_{2.5}$. Moreover, the Project would not expose sensitive receptors to substantial concentrations of Toxic Air Contaminants ("TACs"), as the Project's TAC emissions during both construction and operation of the Project would be well below the BAAQMD significance thresholds. The Project additionally would not expose sensitive receptors to significant carbon monoxide concentrations, as the Project's carbon monoxide emissions would be less than significant. For these reasons and the reasons set forth in the EIR, the Project would not expose sensitive receptors to substantial pollutant concentrations, and the Project thus have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.3-31 through 3.3-37.)

4. Objectionable Odors

Threshold: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Findings: Less-than-significant impact. (Draft EIR, p. 3.3-28.)

Explanation: The Project does not include a land use associated with the generation of odors that could affect a substantial number of people and would not generate such odor impacts. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.3-28.)

D. BIOLOGICAL RESOURCES

1. Riparian Habitat and Sensitive Natural Communities

Threshold: Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Findings: Less-than-significant impact. (Draft EIR, p. 3.4-43.)

Explanation: There are no riparian habitats or sensitive natural communities within the Project site that were identified in local, regional, or federal plans, policies, or regulations. For this reason and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.4-43.)

2. Local Policies or Ordinances Protecting Biological Resources

Threshold: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Findings: Less-than-significant impact. (Draft EIR, p. 3.4-43.)

Explanation: The Project would not conflict with any local policies or ordinances protecting biological resources. For example, the Project would not require removal of any trees, and no permit relating to this issue is therefore required. For these reasons and the reasons set forth in the EIR, there would be a less-than-significant impact relating to this issue, and no mitigation is required. (Draft EIR, p. 3.4-43.)

3. Adopted Habitat Conservation Plans

Threshold: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

Findings: No Impact. (Draft EIR, p. 3.4-43.)

Explanation: The Project site is not located within the boundary of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any approved local, regional, or state habitat conservation plan. Thus, no impact would occur in this regard, and no mitigation is required. (Draft EIR, p. 3.4-43.)

E. ENERGY RESOURCES

1. Wasteful, Inefficient, or Unnecessary Consumption

Threshold: Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.5-14 through 3.5-16.)

Explanation: The Project would not result in inefficient, wasteful, or unnecessary consumption of energy during construction or operational activities. The EIR analyzed the Project's potential consumption of various energy resources, including electricity, natural gas, and petroleum during both the Project's construction and operation phases, and it concluded based on substantial evidence that the Project would have a less-than-significant impact relating to this issue. For these reasons and the reasons set forth in the EIR, the Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. (Draft EIR, pp. 3.5-14 through 3.5-16.)

2. Conflict with Energy Plans

Threshold: Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.15-19 through 3.15-20.)

Explanation: The Project is required to meet Title 24 and California Green Building Standards Code (CALGreen) standards to reduce energy demand and increase energy efficiency, and the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.15-19 through 3.15-20.)

F. GEOLOGY AND SOILS

1. Rupture of an Earthquake Fault

Threshold: Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death, involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Findings: No impact. (Draft EIR, p. 3.6-20.)

Explanation: The Project site is not located within a fault rupture hazard zone. Because the Project site is not crossed by any known active or potentially active fault, the Project would

not directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault, and no mitigation is required. (Draft EIR, p. 3.6-20.)

2. Landslides

Threshold: Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death, involving landslides?

Findings: No impact. (Draft EIR, p. 3.6-20.)

Explanation: The Project site is not located in an area subject to landslides. The Project site is located on relatively flat ground and is not adjacent to any areas with steep slopes or hillsides that could result in a landslide. The Project would therefore not cause potential substantial adverse effects relating to landslides, and the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.6-20.)

3. Soil Erosion or Loss of Topsoil

Threshold: Would the Project result in substantial soil erosion or the loss of topsoil?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.6-20 through 3.6-21.)

Explanation: The Project would not result in substantial soil erosion or the loss of topsoil. A potentially significant impact relating to soil erosion or loss of topsoil could occur if the Project would result in soil erosion sufficient to undermine structures or compromise slope stability—e.g., if the Project would result in rills (small narrow channels) and gullies, whereby storm runoff produces deep incisions into the soils and slopes. The Project, however, would not result in such soil erosion because the Project site is on relatively flat land. Moreover, runoff resulting from the Project would not result in substantial soil erosion or loss of top soil, as runoff would be managed and discharged into an existing detention basin. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.6-20 through 3.6-21.)

4. Septic Tanks

Threshold: Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Findings: No impact. (Draft EIR, p. 3.6-21.)

Explanation: The Project would not include septic tanks or alternative wastewater disposal systems; rather, the Project would connect to the City's sewer system to convey wastewater to a treatment plant. For these reasons and the reasons discussed in the EIR, the Project would not result in a significant impact relating to this issue, and no mitigation is required. (Draft EIR, p. 3.6-21.)

5. Geologic Features

Threshold: Would the Project directly or indirectly destroy a unique geologic feature?

Findings: Less-than-significant impact. (Draft EIR, p. 3.6-21.)

Explanation: The Project would not directly or indirectly destroy a unique geologic feature. The Project site does not contain any unique geologic features, such as a landform or rock outcrop of scientific, cultural, or aesthetic interest. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue and not mitigation is required. (Draft EIR, p. 3.6-21.)

G. GREENHOUSE GAS EMISSIONS

1. Greenhouse Gas Emissions

Threshold: Would the Project generate greenhouse gas emissions ("GHGs"), either directly or indirectly, that may have a significant impact on the environment?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.7-30 through 3.7-31.)

Explanation: The Project would not generate GHGs, either directly or indirectly, that could have a significant impact on the environment. The EIR analyzed the amount of GHGs that would be generated by the Project during both its construction and operation phases, and it concluded based on substantial evidence that the amount of GHGs generated by the Project would be below BAAQMD's GHG threshold of significance. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.7-30 through 3.7-31.)

2. Conflicts with Applicable Plans, Policies, and Regulations

Threshold: Would the Project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.7-31 through 3.7-38.)

Explanation: The Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose or reducing the emissions of greenhouse gases. The City has not adopted an applicable GHG reduction plan. As set forth in the EIR, the Project would be consistent with the Association of Bay Area Governments ("ABAG") and Metropolitan Transportation Commission's Plan Bay Area, the California Air Resources Board's ("CARB") Scoping Plan, and other goals and policies adopted for the purpose of reducing GHG emissions. (Draft EIR, pp. 3.7-31 through 3.7-38.) For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.7-31 through 3.7-38.)

H. HAZARDS AND HAZARDOUS MATERIALS

1. Hazardous Materials

Threshold: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.8-15 through 3.8-16.)

Explanation: The Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during its construction or operation.

During construction of the Project, no acutely hazardous materials would be used, and while some hazardous materials (such as fuels, motor oil, and lubricants) would be used in small amounts, the materials would not pose a significant risk to off-site residents or construction workers because they would be used and stored in accordance with existing laws and regulations. Moreover, development of the Project would be subject to existing regulatory requirements for hazardous materials, including requirements under the National Pollutant Discharge Elimination System ("NPDES") permit through the development and implementation of a Stormwater Pollution Prevention Plan ("SWPPP"). The SWPPP would require implementation of control measures for hazardous material storage, soil stockpiles, inspections, maintenance, training of employees, and containment of releases to prevent contaminated runoff into nearby stormwater collection systems or waterways. Included within the SWPPP, best management practices would be required to contain hazardous materials and minimize the contact of hazardous materials with stormwater. (Draft EIR, p. 3.8-15.)

During operation of the Project, residents would be expected to use and store typical household hazards such as house paint, cleaning products, herbicides, and pesticides. The amounts of hazardous materials that residents store or use is negligible and not considered sufficient to create a significant safety hazard to the public, or otherwise pose a significant risk to human health or the environment. (Draft EIR, p. 3.8-16.)

For these reasons and the reasons set forth in EIR, the Project would not create a significant hazard to the public or the environment through the routine transport, use, or dispose of hazardous materials, and impacts relating to this issue would be less than significant. (Draft EIR, pp. 3.8-15 through 3.8-16.)

2. Acutely Hazardous Materials within ¼ Mile of an Existing or Proposed School

Threshold: Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Findings: Less-than-significant impact. (Draft EIR, p. 3.8-14.)

Explanation: The Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The Project site is not located within one-quarter mile of an existing or proposed school. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.8-14.)

3. Hazardous Materials Sites

Threshold: Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Findings: Less-than-significant impact. (Draft EIR, p. 3.8-14.)

Explanation: The Project would not be located on a site that is included on a list of known hazardous materials sites, as confirmed in the EIR and in a Phase I ESA prepared for the Project. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.8-14.)

4. Public Airports and Private Airstrips

Threshold: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area?

Findings: No impact. (Draft EIR, p. 3.8-15.)

Explanation: The Project site is not located within an airport land use plan or within two miles of an airport. For these reasons and the reasons set forth in the EIR, there would be no impact relating to this issue. (Draft EIR, p. 3.8-15.)

5. Emergency Access

Threshold: Would the Project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.8-20 through 3.8-21.)

Explanation: Neither the construction nor the operation of the Project would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. During construction, the Project will implement the SWPPP, which would include an Integrated Contingency Plan and an evacuation plan for construction workers in the event of an emergency. Compliance with the SWPPP and the Integrated Contingency Plan would ensure impacts are less than significant during construction. The Project would similarly have a less-than-significant impact during its operation phase, as the City's Fire Department will review

the site plans to ensure adequacy of emergency access. Streets and roads will be adequate in terms of width, turning radius, and grade to facilitate access by City firefighting apparatus, and the Project will have alternative emergency ingress and egress. For these reasons and the reasons set forth in the EIR, the Project will have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.8-20 through 3.8-21.)

6. Wildland Fires

Threshold: Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.8-21 through 3.8-22.)

Explanation: Neither construction nor operation of the Project would expose people to adverse impacts involving wildland fire. CalFire does not identify the Project site as being within an area susceptible to wildland fires. During construction of the Project, the Project will comply with best management practices included within the SWPPP to further ensure that the Project would not result in wildfires. Operation of the Project would not have adverse impacts relating to wildland fires, as the Project will be built in compliance with the California Building Code's requirements for fire protection. Moreover, and as discussed above, the Project is designed with an emergency vehicle access to facilitate the ingress and egress of emergency response vehicles, including the City and Napa County Fire Department's apparatus, and the Project is designed to further provide emergency evacuation access for residents. For these reasons and the reasons set forth in the EIR, the Project would not result in a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.8-21 through 3.8-22.)

I. HYDROLOGY AND WATER QUALITY

1. Compliance with Water Quality Standards

Threshold: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.9-34 through 3.9-39.)

Explanation: The Project would not violate any water quality standards or waste discharge requirements, and it would not otherwise substantially degrade surface or groundwater quality. Construction of the Project would not result in any potentially significant impact relating to this issue because the Project would comply with the Construction General Permit, and the City's Stormwater and Runoff Pollution Control Ordinance would require implementation of a SWPPP to address potential construction-related impacts on water quality. The standard requirements contained in a SWPPP are sufficient to address a project's potential to violate water quality standards or waste discharge requirements. Operation of the Project would likewise not result in any potentially significant impact relating to this issue as the Project would comply with the standards and performance criteria contained in the Small MS4 Permit, which requires

development projects to adhere to site design measures, source control measures, treatment control measures, and certain operation and maintenance requirements that ensure a less-than-significant impact. For these reasons and the reasons set forth in the EIR, the Project would not result in a significant impact relating to this issue. (Draft EIR, pp. 3.9-34 through 3.9-39.)

2. Groundwater Supplies

Threshold: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.9-40 through 3.9-43.)

Explanation: The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basis. The County works with local jurisdictions, including the City, to sustainably manage the Napa Valley Groundwater Subbasin in compliance with the Sustainable Groundwater Management Act ("SGMA"). In its most recent assessment of conditions, the County, through its technical consultant, has determined that the Subbasin is not exhibiting significant impacts with regard to the applicable sustainability indicators defined by SGMA, including lowering of groundwater levels, depletion of groundwater in storage, degradation of groundwater quality, and depletion of interconnected surface waters. The EIR additionally includes an analysis of the Project's demand on groundwater resources, including the Project's use of the on-site well, and the EIR concluded, based on substantial evidence, that the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.9-40 through 3.9-43.)

3. Existing Drainage Patterns and Runoff

Threshold: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.9-44 through 3.9-45.)

Explanation: The Project would not alter the course of a stream or river and is not located within a Special Flood Hazard Area ("SFHA") of the Napa River, and accordingly, the Project would not impede or redirect flood flows in a manner that would result in substantial erosion or siltation on- or off-site. Moreover, the Project would not result in substantial erosion or siltation on- or off-site as the off-site City detention basin has been designed with adequate capacity to capture and treat increases in the rate and volume of stormwater runoff associated with development in this area of the City, including development of the Project site with impervious surfaces. Additionally, the Project would be subject to the most recent standards and performance

criteria contained in the Small MS4 Permit and a Stormwater Control Plan that complies with the Bay Area Stormwater Management Agencies Post Construction Manual. The Project's compliance with existing permitting requirements and standard conditions of approval (i.e., MS4 Permit and the City's Stormwater and Runoff Pollution Control Ordinance) are sufficient to avoid water quality degradation, including erosion and siltation. For these reasons and the reasons set forth in the Draft EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.9-44 through 3.9-45.)

4. Surface Runoff and Flooding

Threshold: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite?

Findings: Less-than-significant impact. (Draft EIR, p. 3.9-45.)

Explanation: The Project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. The City-owned off-site detention basin has been designed to store the increase in storm water runoff generated from the Project site during a 100-year storm event. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.9-45.)

5. Stormwater Drainage System Capacity and Polluted Runoff

Threshold: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.9-45 through 3.9-46.)

Explanation: The Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The Project would comply with the City's Municipal Code, which requires the Project to construct storm drains or improve existing storms drains to ensure adequate capacity is available to carry runoff produced by a 10-year storm event. The Project's utility plan confirms that on-site storm flows at the Project site would be conveyed to the off-site detention center via storm drain lines. Moreover, the existing off-site detention basin was designed to accommodate runoff from the Project site. For these reasons and the reasons set forth in the EIR, the Project's impact relating to this issue would be less than significant. (Draft EIR, pp. 3.9-45 through 3.9-46.)

6. Flood Flows

Threshold: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Findings: Less-than-significant impact. (Draft EIR, p. 3.9-44.)

Explanation: The Project would not alter the course of a stream or river and is not located within a Special Flood Hazard Area ("SFHA") of the Napa River, and accordingly, the Project would not impede or redirect flood flows in a manner that would result in substantial erosion or siltation on- or off-site. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.9-13.)

Natural Hazards

Threshold: In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to project inundation?

Findings: No impact. (Draft EIR, p. 3.9-34.)

Explanation: The Project site is not within a flood hazard, tsunami, or seiche zone, and the Project and does not contain the preconditions necessary for a project to be at risk of hazards due to a tsunami, or seiche which require a reasonable distance and elevation relative to a coastline (for sea level rise or seiche) or large body of water (for seiche waves). There be no impact (or risk) associated with a tsunami or seiche. For these reasons and the reasons set forth in the EIR, there would be no impact relating to this issue. (Draft EIR, p. 3.9-13.)

7. Conflict with Water Quality Control Plan or Sustainable Groundwater Management Plan

Threshold: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Findings: Less-than-significant impact. (Draft EIR, p. 3.9-46.)

Explanation: The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The County works with local jurisdictions, including the City, to sustainably manage the Napa Valley Groundwater Subbasin in compliance with SGMA. In its most recent assessment of conditions, the County, through its technical consultant, determined that the Subbasin is not exhibiting significant impacts with regard to the applicable sustainability indicators defined by SGMA, including lowering of groundwater levels, depletion of groundwater in storage, degradation of groundwater quality, and depletion of interconnected surface waters. Moreover, the Project would comply with applicable regulations and permits designed to comply with the Water Quality Control Plan for the San Francisco Bay

Region. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.9-46.)

J. LAND USE AND PLANNING

1. Divide an Established Community

Threshold: Would the Project physically divide an established community?

Findings: No impact. (Draft EIR, p. 3.10-14.)

Explanation: Due to the Project's location, development of the Project would not physically divide an established community because there is no development northwest or northeast of the site. The Project would, instead, provide a continuation of the existing neighborhood with development of a new residential area. For these reasons and the reasons set forth in the EIR, the Project would have no impact relating to this issue. (Draft EIR, p. 3.10-14.)

2. Applicable Land Use Plans, Policies, or Regulations

Threshold: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.10-14 through 3.10-19.)

Explanation: The Project would not cause a significant environmental impact due to a conflict with the applicable General Plan or any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The EIR analyzed the Project's consistency with the City's 1993 General Plan, 2019 General Plan, Housing Element Update, and Zoning Ordinance, as well as the Project's consistency with the Plan Bay Area 2040. The EIR concluded, based on substantial evidence, that the Project would not result in a significant environmental impact due to a conflict with any of the foregoing. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.10-14 through 3.10-19.)

K. MINERAL RESOURCES

1. Statewide Mineral Resources

Threshold: Would the Project result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

Findings: No impact.

Explanation: The Project site is not located within an area known to be underlain by regionally important mineral resources. The California Geological Survey identifies the Project site as MRZ-4, indicating that insufficient information exists to assign the site with any other mineral resource zone

designation. No mineral resources have been identified in or around the Project site, and none of the previous use of the Project site included mining activities or mineral processing. For these reasons, this issue was dismissed from further discussion during the EIR scoping period (see Notice of Preparation issued March 6, 2018). No comments were received by the City regarding mineral resources during scoping or review of the Draft EIR. The Project would no impact relating to mineral resources, and no mitigation is required.

2. Locally Important Mineral Resources

Threshold: Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Findings: No impact.

Explanation: The Project site is not located within an area known to be underlain by locally-important mineral resources. The California Geological Survey identifies the Project site as MRZ-4, indicating that insufficient information exists to assign the site with any other mineral resource zone designation. No mineral resources have been identified in or around the Project site, and none of the previous use of the Project site included mining activities or mineral processing. The City's General Plan does not identify the Project site as containing locally important mineral resources. For these reasons, this issue was dismissed from further discussion during the EIR scoping period (see Notice of Preparation issued March 6, 2018). No comments were received by the City regarding mineral resources during scoping or review of the Draft EIR. The Project would have no impact relating to mineral resources, and no mitigation is required.

L. NOISE

1. Groundborne Vibration

Threshold: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.11-17 through 3.11-18.)

Explanation: The Project would not generate excessive groundborne vibration or groundborne noise levels. The EIR analyzed the vibration that would be generated by the use of heavy equipment necessary for the construction of the Project, and it determined, based on substantial evidence, that vibration generated by the Project would be below the relevant threshold of significance set forth by Federal Transit Administration. For these reasons and the reasons set forth in the EIR, the Project would result in a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.11-17 through 3.11-18.)

2. Private/Public Airports

Threshold: For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Findings: No impact. (Draft EIR, p. 3.11-14.)

Explanation: The Project site is not located within the vicinity of a private airstrip or an airport land use plan, and it is not located within two miles of a public airport. For these reasons and the reasons set forth in the EIR, the Project would have no impact relating to this issue. (Draft EIR, p. 3.11-14.)

M. POPULATION AND HOUSING

1. Induce Substantial Growth

Threshold: Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Findings: Less-than-significant impact. (Draft EIR, pp. 4-3 through 4.6.)

Explanation: The Project would not induce substantial unplanned population growth in the area. While the Project does entail residential development and would result in population growth, the population growth is not unplanned. The Project site was designated for future residential development in the City's 1993 General Plan and 2019 General Plan, and the Project site is located within the City's Urban Limit Line with access to existing utilities. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 4-3 through 4.6.)

2. Displacing Housing and People

Threshold: Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Findings: No impact.

Explanation: The Project does not entail the demolition of any housing, and would not otherwise displace any residents. (Draft EIR, p. 2-2.) For these reasons and the reasons discussed in the EIR, the Project would not have no impact relating to this issue.

N. PUBLIC SERVICES

1. Fire Protection Services

Threshold: Would the proposed Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.12-13 through 3.12-14.)

Explanation: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, relating to fire protection services. The Project site would be served by the City's fire department located at 1480 Main Street, approximately 0.2 miles from the Project site. Moreover, the increase in population generated by the Project is within the projected population growth in the City's 1993 and 2019 General Plans and would not generate an increase in population that would necessitate the construction of a new facility or expansion of an existing facility. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.12-13 through 3.12-14.)

2. Police Services

Threshold: Would the proposed Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.12-14 through 3.12-15.)

Explanation: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, relating to police protection services. The Project would be served by the City's police station, approximately 0.2 miles from the Project site. While the City would likely hire an additional police officer to serve the approximately 213 residents the Project would add to the City, the addition of one police officer would not require the construction of new, or the expansion of existing, police facilities because adequate space is available at the existing St. Helena Police Department Facility. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.12-14 through 3.12-15.)

3. Education

Threshold: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?

Findings: Less-than-significant impact. (Draft EIR, p. 3.12-15.)

Explanation: No school would need to be constructed or physically altered in order to accommodate the approximately 28 students that would be generated by the Project. As set forth in the EIR, the local primary school, elementary school, middle school, and high school all have sufficient capacity to accommodate the students generated by the Project. In addition, the Project will pay all required school impact fees consistent with Government Code Sections 65995–65998. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.12-15.)

4. Parks

Threshold: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.12-16 through 3.12-17.)

Explanation: Parks within the vicinity of the Project include Lyman Park, Jacob Meily Park, and Lewis Station, all of which are located within approximately 0.3 miles of the Project site. These parks have adequate facilities to accommodate the Project's estimated 213 residents, with such facilities including picnic and turf areas, children's playgrounds, and a walking trail. Moreover, park and recreational impact fees are imposed on all residential development within the City, and the Project applicant must pay all required park fees, which the City will use to ensure that the increased use of existing parks due to the Project's anticipated residents would not cause result in substantial physical deterioration of the park facilities. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.12-16 through 3.12-17.)

5. Other Public Facilities

Threshold: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant

environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

Findings: Less-than-significant impact. (Draft EIR, p. 3.12-16.)

Explanation: While the 213 residents generated by the Project would increase demand for existing public facilities within the City (including the George and Elsie Wood Public Library and City Hall), Chapter 3.32 of the City's Municipal Code requires payment of a civic improvement fee that would offset any impacts the Project might have. The civic improvement fee was calculated to ensure new development would pay its proportionate share of the cost of existing and future capital assets required to serve the City. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.12-16.)

O. RECREATION

1. Existing Facilities

Threshold: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.12-16 through 3.12-17.)

Explanation: Parks within the vicinity of the Project include Lyman Park, Jacob Meily Park, and Lewis Station, all of which are located within approximately 0.3 miles of the Project site. These parks have adequate facilities to accommodate the Project's estimated 213 residents, with such facilities including picnic and turf areas, children's playgrounds, and a walking trail. Moreover, park and recreational impact fees are imposed on all residential development within the City, and the Project applicant must pay all required park fees, which the City will use to ensure that the increased use of existing parks due to the Project's anticipated residents would not cause result in substantial physical deterioration of the park facilities. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.12-16 through 3.12-17.)

2. New Recreational Facilities

Threshold: Does the Project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Findings: No impact. (Draft EIR, pp. 3.12-16 through 3.12-17.)

Explanation: The Project does not propose to construct any new on- or off-site recreation facilities, and the Project would not expand any existing off-site recreational facilities. For the foregoing reasons and the reasons discussed in the EIR, the Project would have no impact relating to this issue. (Draft EIR, pp. 3.12-16 through 3.12-17.)

P. TRANSPORTATION

1. Consistency with Circulation Performance Plans

Threshold: Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.14-39 through 3.14-40.)

Explanation: The Project would be consistent with applicable plans, city ordinances, and policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Notably, the Project would provide adequate sidewalks and bicycle amenities and would not conflict with any plans or policies supporting either the development of these facilities or the use of these facilities. The Project would not conflict with any plans or policies that address transit, pedestrian, and bicycle facilities. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.14-39 through 3.14-40.)

2. Transportation Hazards

Threshold: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.14-46 through 3.14-51.)

Explanation: The Project would not increase hazards due to a geometric design feature or incompatible use that would contribute to an increase in collisions or create visual obstructions that would impede vehicles, bicyclists, and pedestrians from having safe access to and from the Project site.

The Project would result in the extension and construction of roads, but these roads would be designed to accommodate emergency service vehicles and maintain accessibility for pedestrians and bicyclists according to City street design standards. For example, the Project would extend Starr Avenue northward into the Project site, and intersect with Adams Street, which the Project would also extend eastward from its current terminus. As Starr Avenue is extended northward, it would narrow from an approximately 75-foot right-of-way (ROW) to a 60-foot ROW with 4-foot-side sidewalks and a 6-foot-wide planter strip on both sides of the street, consistent with City's street standards. This extension, along with Adams Street, would be designed to accommodate emergency service vehicles and maintain accessibility for pedestrians and bicyclists according to City street design standards. (Draft EIR, pp. 3.14-46 through 3.14-47.)

The Project would also result in internal public residential streets within the Project site to accommodate neighborhood circulation and provide on-street parking on both sides of the Starr Avenue and Adams Street extensions (where permitted). These roadways would be designed to be consistent with all applicable City street design criteria and conform to the City's Municipal Code

(Section 16.32.060) to ensure that emergency service vehicles can adequately access and circulate within the Project site. As explained in the EIR, there are no visual obstructions that would impede vehicles, bicyclists, and pedestrians from having safe access to and from the Project site. (Draft EIR, p. 3.14-47.)

The EIR additionally considered accident data and a collision analysis to determine whether the Project would increase hazards due to a geometric design feature or incompatible use. The analysis, based on substantial evidence, demonstrates that the Project would have a less-than-significant impact. (Draft EIR, pp. 3.14-47 through 3.14-48.)

The EIR further analyzed the Project's potential to increase hazards during Project construction, and the EIR concluded, based on substantial evidence, that the Project would have a less-than-significant impact. Notably, while certain construction activities could require temporary lane closures, the Project would first be required to obtain construction permits through the City, and the City's traffic engineer would first prepare a temporary traffic control plan for the construction activities. As a result, the Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses during construction of the Project. (Draft EIR, pp. 3.14-49 through 3.14-50.)

For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.14-46 through 3.14-51.)

3. Emergency Access

Threshold: Would the Project result in inadequate emergency access?

Findings: Less-than-significant impact. (Draft EIR, p. 3.15-51.)

Explanation: The Project would not result in inadequate emergency access. The St. Helena Fire Department has reviewed the proposed Tentative Subdivision Map, and it did not identify any issues with inadequate emergency access. Notably, the Project includes two primary access points, Star Avenue and Adams Street, as well as a separate emergency vehicle access. In the event of an emergency, there would be three avenues that would enable vehicles to enter or exit the Project site. Moreover, the Project would be consistent with 1993 General Plan Policy 8.5.7 and 2019 General Plan Policy PS4.6, which require all streets and roads be designed with adequate width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide alternative emergency ingress and egress. Additionally, once the Tentative Subdivision Map is approved, the Project's Final Subdivision Map would be subject to additional review by the St. Helena Fire Department to confirm that the Project provides proper emergency access. For these reasons and the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, p. 3.15-51.)

Q. UTILITIES AND SERVICE SYSTEMS

1. Utilities Infrastructure

Threshold: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.13-27 through 3.13-30.)

Explanation: While the Project would require new water, sewer, storm drain, electric power, natural gas, and telecommunications infrastructure on site to serve the proposed residential development (e.g., on-site water, sewer, and storm drain lines and utility connections), the Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities. As explained in the EIR, the City's water and wastewater treatment and conveyance facilities and the City's stormwater drainage facilities have the capacity to accommodate the demands of the Project, and the Project would not require the construction of new such facilities or expansion of the existing facilities. Additionally, the City collects development impact fees on new development to pay for public improvements relating to water projects, sewer projects, and stormwater drainage projects. The Project applicant would pay these fees, which would help offset any increased demands on the City's water, sewer, and stormwater drainage systems. The Project will be served by Marin Clean Energy for electricity service, by Pacific Gas & Electric Company for natural gas service, and by various service providers for telecommunications services. The Project would not require the relocation or construction of electric power, natural gas, or telecommunications facilities. For these reasons and the reasons set forth in the EIR, the Project would result in a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.13-27 through 3.13-30.)

2. Sufficient Water Supplies

Threshold: Would sufficient water supplies be available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.13-31 through 3.13-32.)

Explanation: Sufficient water supplies would be available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. The long-term safe yield of the City's water supply is 1,950 acre-feet per year, which consists of 600 acre-feet from the City of Napa contract, 900 acre-feet from Bell Canyon reservoir, and an average use of 450 acre-feet from groundwater. Recent water usage in the City is well below the 1,950 acre-feet target, with water usage ranging from 1,882 acre-feet (2013) to 1,465 acre-feet (2016) and averaging 1,637 acre-feet over the last eight years. Even if one were to add the Project's entire water demand of 37.04 acre-feet per year to the highest water demand in recent years of 1,882

acre-feet, this would result in a City-wide water demand of 1,919 acre-feet, which is below the Safe Yield of 1,950 acre-feet.

In addition, the Project will comply with the City's water neutrality policy, meaning that the 37.04 acre-feet per year of water that would be used during Project operation would be completely offset through a combination of using the on-site water well for irrigation needs and implementation of water conserving measures. Notably, the existing on-site agricultural well is proposed to be used to provide non-potable supplies to the separately plumbed landscape irrigation systems throughout the Project site to irrigate public and private landscaping. The on-site well has sufficient capacity to meet the Project's estimated landscape water demand of 17.16 acre-feet per year. Moreover, to comply with the City's water neutrality policy, the Project applicant is required to off-set the Project's water demand as a condition of approval. To comply with Municipal Code section 13.12.030, the Project applicant shall identify and implement offsite improvements that reduce water loss from the public water distribution system and/or identify and implement offsite improvements that result in a net increase in potable water availability equivalent to 19.8 AFY, or a combination of these.

For these reasons and the reasons set forth in the EIR, the Project would result in a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.13-31 through 3.13-32.)

3. Wastewater Treatment Capacity

Threshold: Would the Project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.13-32 through 3.13-33.)

Explanation: The City's Waste Water Treatment Plant ("WWTP") has adequate capacity to serve the Project's existing demand in addition to the WTTP's existing commitments. The WWTP is permitted, and has capacity, to discharge up to 0.5 MGD during dry weather and up to 2.8 MGD during wet weather of treated effluent. The Project is expected to generate an average of 0.018 MGD of wastewater. As the WWTP currently treats an average flow of 0.384 MGD, the additional 0.018 MGD combined with the current average flow of 0.384 MGD would not exceed the plant's permissible allowable average dry weather flow effluent of 0.5 MGD. Because adequate capacity is available at the WWTP to serve the Project, and for the reasons discussed in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.13-32 through 3.13-33.)

4. Landfill Capacity

Threshold: Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.13-33 through 3.13-34.)

Explanation: The Project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, and it would not otherwise impair the attainment of solid waste reduction goals. During construction, the Project would contribute less than 0.1% of the Clover Flat Landfill's permitted capacity per day. As this is a relatively minimal contribution, the Clover Flat Landfill would have adequate landfill capacity for the Project's construction debris. During operation, the Project would contribute approximately 0.04 percent of the average unused daily capacity of the Clover Flat Landfill, and the Project would therefore not exceed the capacity of the landfill. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.13-33 through 3.13-34.)

5. Solid Waste

Threshold: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Findings: Less-than-significant impact. (Draft EIR, pp. 3.13-33 through 3.13-34.)

Explanation: The Project would comply with applicable federal, state, and local management and reduction statutes and regulations related to solid waste. Notably, the 2016 CALGreen Tier 1 mandatory measures require preparation of a Construction Waste Management Plan that documents the diversion of materials as required by CALGreen and at least 65% of nonhazardous construction waste would be required to be recycled or salvaged. The Project would comply with these mandatory measures. Additionally, the Project would comply with the City's Source Reduction and Recycling Element solid waste diversion requirement and the AB 939 solid waste diversion requirements. The Clover Flat Landfill provides mandated commercial recycling processing services, production of organic feedstocks for composting, and renewable energy generation. The Project would be required to comply with all applicable local and state solid waste diversion, minimization, and recycling regulations. For these reasons and the reasons set forth in the EIR, the Project would have a less-than-significant impact relating to this issue. (Draft EIR, pp. 3.13-33 through 3.13-34.)

R. WILDFIRES

1. Impairment of Adopted Emergency Response Plan or Emergency Evacuation Plan

Threshold: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

Findings: Less-than-significant impact. (Draft EIR, p. ES-3.)

Explanation: The Project is not located on a site designated as a very high fire hazard severity zone ("VHFHSZ") by the California Department of Forestry and Fire Protection ("CalFire") and would therefore have a less-than-significant impact relating to this issue. Regardless, as noted above and discussed in the Draft EIR, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. (Draft EIR, pp. 3.8-20 through 3.8-21.) For the foregoing reasons and the reasons discussed in the Draft EIR, the Project would not result in a significant impact relating to this issue, and no mitigation is required. (Draft EIR, p. ES-3.)

2. Exacerbation of Wildfire Risks

Threshold: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Findings: Less-than-significant impact. (Draft EIR, p. ES-3.)

Explanation: The Project is not located on a site designated as VHFHSZ by CalFire and would therefore have a less-than-significant impact relating to this issue. Regardless, the Project site is flat, so the Project would not expose Project occupants to fire hazards due to proximity to hilly terrain or landslides due to post-fire conditions. For the foregoing reasons and the reasons discussed in the EIR, the Project would not result in a significant impact relating to this issue, and no mitigation is required. (Draft EIR, p. ES-3.)

3. Infrastructure-Related Wildfire Risks

Threshold: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project require installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Findings: Less-than-significant impact. (Draft EIR, pp. 4.16-13 through 4.16-14.)

Explanation: The Project is not located on a site designated as VHFHSZ by CalFire and would therefore have a less-than-significant impact relating to this issue. Moreover, the Project does not require installation of infrastructure that could exacerbate fire risk. For the foregoing reasons and the reasons discussed in the EIR, the Project would not result in a significant impact relating to this issue, and no mitigation is required. (Draft EIR, p. ES-3.)

4. Landslides and Slope Instability

Threshold: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project expose people or structures to significant risks,

including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Findings: Less-than-significant impact. (Draft EIR, p. ES-3.)

Explanation: The Project is not located on a site designated as VHFHSZ by CalFire and would therefore have a less-than-significant impact relating to this issue. Regardless, the Project site is flat, so the Project would not expose Project occupants to fire hazards due to proximity to hilly terrain or landslides due to post-fire conditions. For the foregoing reasons and the reasons discussed in the EIR, the Project would not result in a significant impact relating to this issue, and no mitigation is required. (Draft EIR, p. ES-3.)

SECTION 2. FINDINGS REGARDING ENVIRONMENTAL IMPACTS MITIGATED TO A LEVEL OF LESS THAN SIGNIFICANT

The City Council hereby finds that feasible mitigation measures have been identified in the EIR and this Resolution that will avoid or substantially lessen the following potentially significant environmental impacts to a level of less than significant. The potentially significant impacts, and the mitigation measures that will reduce them to a less-than-significant level, are as follows:

A. AESTHETICS

1. Light and Glare

Threshold: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Findings: Less than significant with mitigation incorporated. (Draft EIR, p. 3.1-41.) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: The Project would not create a new source of glare that would adversely affect day or nighttime views in the area, and the Project's impacts relating to glare would be less than significant. (Draft EIR, p. 3.1-34.)

The Project would introduce new light sources into an area that is currently undeveloped, and this could potentially impact nighttime views absent mitigation. To ensure that any aesthetic light-related impact of the Project is mitigated to a level of less than significant, the following mitigation measure has been identified:

> ***AES-1****: To minimize spillover light while ensuring adequate nighttime security, the Project applicant shall prepare lighting design guidelines for the Project to be reviewed and approved by the City as part of the Design Review process. The lighting design guidelines shall include a lighting plan noting fixtures and lumens, and standards such as, lighting*

is to be shielded and downward focused to reduce glare and spillover light, up cast decorative lighting shall be limited to minimize effects on wildlife and to retain the rural ambience of the area, and the use of mirrored glass shall not be permitted. The lighting guidelines shall conform with Lighting Zone 2 of Title 24, Part 6, of the California Code of Regulations. The guidelines and lighting plan shall be approved as part of the Design Review application.

Implementation of MM AES-1 would ensure that light introduced to the Project site would not adversely affect day or nighttime views in the area by minimizing spillover light and limiting up cast light. With implementation of MM AES-1, the Project's potential direct and cumulative impacts relating to new lights introduced to the Project site would be reduced to a level of less than significant. (Draft EIR, p. 3.1-41.)

B. BIOLOGICAL RESOURCES

1. Special Status Species

Threshold: Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service?

Findings: Less than significant with mitigation incorporated. (Draft EIR, pp. 3.4-43 through 3.4-49.) Changes or alterations have been required in, or incorporated into the Project that avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: No federal or state-listed wildlife species have the potential to occur on the Project site. Only a small number of special-status wildlife species have the potential to occur onsite—native bats, the white-tailed kite, and nesting and migratory birds. There is low potential for these species to occur on the Project site. Nevertheless, absent mitigation, the Project could have a potentially substantially adverse effect on these species.

Native bats. The Project is not anticipated to result in any direct impacts to roosting bats. Roosting habitat, such as rock outcrops, trees, caves, and human-made structures, are absent from the Project site. Additionally, the pallid bat is unlikely to roost on or near the Project site due to frequent human disturbance. Moreover, the Project would avoid potential roost sites within the vicinity of the Project site, such as the trees along the southeastern margin of the site.

Absent mitigation, the Project could potentially have indirect impacts on native bats. If bats were to roost in the area during construction, they could be indirectly impacted by construction-related noise. Indirect impacts to roosting bats could also result from increased light, glare, and activity associated with operation of the Project. To ensure that any potential impacts

relating to roosting bats are mitigated to a level of less than significant, the following mitigation measures have been identified:

> ***BIO-1:*** *A qualified biologist shall conduct a habitat assessment for bats in trees adjacent to the Project site within 2 weeks prior to any Project construction (site clearing, grading). The habitat assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site and 50 feet around these areas. Potential roosting features found during the survey shall be mapped and described in a survey letter report. If roosting bats (individuals or colonies) are detected within the Project site, California Department of Fish and Wildlife shall be notified as soon as possible prior to any construction activity to confirm the bats can be avoided during construction. If a bat roosting or maternity colony cannot be completely avoided, a qualified biologist shall prepare a bat mitigation and monitoring plan for California Department of Fish and Wildlife review and approval, and that plan shall be implemented prior to commencement of construction that could impact the roosting bats or maternity colony.*

> ***AES-1****: To minimize spillover light while ensuring adequate nighttime security, the Project applicant shall prepare lighting design guidelines for the Project to be reviewed and approved by the City as part of the Design Review process. The lighting design guidelines shall include a lighting plan noting fixtures and lumens, and standards such as, lighting is to be shielded and downward focused to reduce glare and spillover light, up cast decorative lighting shall be limited to minimize effects on wildlife and to retain the rural ambience of the area, and the use of mirrored glass shall not be permitted. The lighting guidelines shall conform with Lighting Zone 2 of Title 24, Part 6, of the California Code of Regulations. The guidelines and lighting plan shall be approved as part of the Design Review application.*

Implementation of MM BIO-1 would ensure that measures be taken to avoid any potentially significant impact to roosting bats during construction of the Project. Additionally, implementation of MM AES-1 would address indirect impacts to native bats relating to spillover light, which can affect some species. With implementation of these required mitigation measures, potential direct, indirect, and cumulatively considerable impacts to native bats would be reduced to a level of less than significant. (Draft EIR, pp. 3.4-46 through 3.4-48.)

White-tailed kites. No white-tailed kites have been observed on or near the Project site during the 2011, 2015, 2018, or 2019 biological surveys of the site. Moreover, no tree removal is proposed as part of the Project, so no direct impacts (such as mortality and/or injury to nesting kites) are anticipated as a result of the Project. However, if white-tailed kites were to be breeding near the site before Project initiation, construction-related activities could potentially cause an adult kite to abandon an active nest that is in close proximity to the construction area, potentially leaving eggs or chicks vulnerable to predation or without provisions. In addition, increased lighting and glare associated with the Project's operation could result in indirect impacts to the white-tailed kites' nesting habitat. As explained below, mitigation is necessary to ensure that any potentially significant impact relating to white-tailed kites is mitigated to a level of less than significant.

Nesting and migratory birds. No active nests for nesting or migratory birds were documented on or near the Project site during the 2011, 2015, 2018, and 2019 biological surveys. However, trees, shrubs, grassland, and vineyards on or adjacent to the Project site provide potential nesting habitat for bird species protected under the Migratory Bird Treaty Act ("MBTA") and California Fish and Game Code section 3500. Direct impacts to nesting birds could result from vegetation clearing and site grading during Project construction. Potential indirect impacts to birds nesting near the Project site during construction would essentially be identical to those described above for white-tailed kite.

To ensure that any potential impacts relating to white-tailed kite and nesting and migratory birds are mitigated to a level of less than significant, the following mitigation measures have been identified:

> ***BIO-2:*** *If construction activities are scheduled to occur during the breeding season for birds (February 1 through August 31), the Project applicant or their contractor shall implement the following measures to avoid potential adverse effects to nesting raptors and other nesting birds:*
>
> - *Preconstruction surveys by a biologist of all potential nesting habitats within 500-feet of construction activities, where accessible, shall be conducted by a qualified biologist. Surveys shall occur no more than 14 days prior to the initiation of site disturbance. If construction is stopped for 14 days or more during the breeding season, a new preconstruction nesting bird survey must be conducted before work can be restarted to ensure no new nesting has occurred in the interim.*
>
> - *If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required, following submittal of a survey report letter to the City of St. Helena Planning Department.*

- *If active nests are found during preconstruction surveys, a no-disturbance buffer shall be created around active nests during the breeding season or until it is determined by the biologist that all the young have fledged. The buffers shall be established by the biologist in conjunction with the California Department of Fish and Wildlife. Typical buffers may include 500 feet for raptors and 50 to 250 feet for other bird species based on the location of the nest, the nesting species present, and types of construction activities that may cause potential nest abandonment. The perimeter of the buffer zone shall be fenced or marked with staked flagging.*

***AES-1**: To minimize spillover light while ensuring adequate nighttime security, the Project applicant shall prepare lighting design guidelines for the Project to be reviewed and approved by the City as part of the Design Review process. The lighting design guidelines shall include a lighting plan noting fixtures and lumens, and standards such as, lighting is to be shielded and downward focused to reduce glare and spillover light, up cast decorative lighting shall be limited to minimize effects on wildlife and to retain the rural ambience of the area, and the use of mirrored glass shall not be permitted. The lighting guidelines shall conform with Lighting Zone 2 of Title 24, Part 6, of the California Code of Regulations. The guidelines and lighting plan shall be approved as part of the Design Review application.*

Implementation of MM BIO-2 would ensure that measures be taken to avoid any potentially significant impact concerning white-tailed kite, nesting birds, and migratory birds during the avian nesting season. Additionally, implementation of MM AES-1 would address indirect impacts to white-tailed kite, nesting birds, and migratory birds relating to spillover light, which can affect some species. With implementation of these required mitigation measures, potential direct, indirect, and cumulatively considerable impacts to white-tailed kite, nesting birds, and migratory birds would be reduced to a level of less than significant. (Draft EIR, pp. 3.4-46 through 3.4-48.)

For the foregoing reasons and the reasons discussed in the EIR, impacts relating to this issue would be less than significant with the incorporation of MM BIO-1, MM BIO-2, and MM AES-1. (Draft EIR, pp. 3.4-43 through 3.4-49.)

2. Wetlands

Threshold: Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Findings: Less than significant with mitigation incorporated. (Draft EIR, p. 3.4-49.) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: The Project site supports 0.07 acres of wetlands, 870 linear feet of other waters, consisting of four seasonal wetlands and two agricultural ditches. Construction activities would result in the fill of the four wetlands, and construction of a retaining wall on or near the property line may potentially impact agricultural ditches by filling or otherwise altering the structure or flow of these features. (Draft EIR, p. 3.4-49.) To ensure that any potential impacts of the Project relating to wetlands are mitigated to a level of less than significant, the following mitigation measure has been identified:

> ***BIO-3:*** *Wetland permits (e.g., 404 Nationwide Permit, 401 Water Quality Certification, and 1602 Streambed Alteration Agreement, respectively) shall be obtained prior to any grading work. Prior to issuance of a grading permit, the Project applicant shall demonstrate authorization from the Army Corp of Engineers and any other regulatory agency to alter the wetland.*

Implementation of MM BIO-3, through the permitting process for waters of the state and waters of the U.S., compensation would be required for a loss of wetlands that can be avoided or replaced on-site. Compensation may be in the form of off-site replacement or purchase of approved mitigation banking credits. With implementation of MM BIO-3, potential direct, indirect, and cumulatively considerable impacts to wetlands would be reduced to a level of less than significant. (Draft EIR, p. 3.4-49.)

3. Wildlife Movement and Nesting/Migratory Birds

Threshold: Would the Project interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Findings: Less than significant with mitigation incorporated. (Draft EIR, pp. 3.4-50 through 3.4-51.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: The Project site does not function as a wildlife movement corridor due to the surrounding development, lack of connectivity with other undeveloped areas, and existing and

historic uses of the site. Moreover, the Project site does not provide suitable aquatic habitat for native resident or migratory fish species, and the Project site does not provide an essential habitat linkage or migratory corridor functions for resident or migratory wildlife. Additionally, existing permitting requirements and conditions of approval (e.g., MS4 Permit and the City's Stormwater and Runoff Pollution Control Ordinance) are sufficient to avoid water quality degradation and to meet water quality standards, rendering potential indirect impacts to any native resident or migratory fish via construction runoff in the Napa River less than significant.

Absent mitigation, the Project could potentially impede the use of native wildlife nursery sites. Although the annual grassland onsite does not provide adequate cover or nursery sites for many mammal species, trees along the edge of the site could provide suitable habitat for nesting birds and roosting bats. In addition, some birds may use the grassland for nesting when sufficient (i.e., tall) vegetation is present. Moreover, because the riparian corridor along the Napa River is located approximately 500 feet north of the Project site, absent mitigation, lighting and increased usage of the site by humans may result in indirect effects to local wildlife using the riparian corridor for nursery sites or as a migratory corridor. To ensure that any such potential impacts are mitigated to a level of less than significant, the following mitigation measures have been identified:

> ***AES-1****: To minimize spillover light while ensuring adequate nighttime security, the Project applicant shall prepare lighting design guidelines for the Project to be reviewed and approved by the City as part of the Design Review process. The lighting design guidelines shall include a lighting plan noting fixtures and lumens, and standards such as, lighting is to be shielded and downward focused to reduce glare and spillover light, up cast decorative lighting shall be limited to minimize effects on wildlife and to retain the rural ambience of the area, and the use of mirrored glass shall not be permitted. The lighting guidelines shall conform with Lighting Zone 2 of Title 24, Part 6, of the California Code of Regulations. The guidelines and lighting plan shall be approved as part of the Design Review application.*
>
> ***BIO-1:*** *A qualified biologist shall conduct a habitat assessment for bats in trees adjacent to the Project site within 2 weeks prior to any Project construction (site clearing, grading). The habitat assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site and 50 feet around these areas. Potential roosting features found during the survey shall be mapped and described in a survey letter report. If roosting bats (individuals or colonies) are detected within the Project site, California Department of Fish and Wildlife shall be notified as soon as possible prior to any construction activity to confirm the bats can be avoided during*

construction. If a bat roosting or maternity colony cannot be completely avoided, a qualified biologist shall prepare a bat mitigation and monitoring plan for California Department of Fish and Wildlife review and approval, and that plan shall be implemented prior to commencement of construction that could impact the roosting bats or maternity colony.

BIO-2: *If construction activities are scheduled to occur during the breeding season for birds (February 1 through August 31), the Project applicant or their contractor shall implement the following measures to avoid potential adverse effects to nesting raptors and other nesting birds:*

- *Preconstruction surveys by a biologist of all potential nesting habitats within 500-feet of construction activities, where accessible, shall be conducted by a qualified biologist. Surveys shall occur no more than 14 days prior to the initiation of site disturbance. If construction is stopped for 14 days or more during the breeding season, a new preconstruction nesting bird survey must be conducted before work can be restarted to ensure no new nesting has occurred in the interim.*

- *If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required, following submittal of a survey report letter to the City of St. Helena Planning Department.*

- *If active nests are found during preconstruction surveys, a no-disturbance buffer shall be created around active nests during the breeding season or until it is determined by the biologist that all the young have fledged. The buffers shall be established by the biologist in conjunction with the California Department of Fish and Wildlife. Typical buffers may include 500 feet for raptors and 50 to 250 feet for other bird species based on the location of the nest, the nesting species present, and types of construction activities that may cause potential nest abandonment. The perimeter of the buffer zone shall be fenced or marked with staked flagging.*

Implementation of MM AES-1 would ensure that lighting associated with the Project would adhere to guidelines and standards that reduce glare and spillover light and would ensure that indirect impacts to wildlife relating to light would be reduced to a level of less than significant. Implementation of MM BIO-1 would avoid any potentially significant impact to roosting bats

during construction of the Project, while implementation of MM BIO-2 would avoid any potentially significant impact concerning white-tailed kite, nesting birds, and migratory birds during the avian nesting season. With implementation of MM AES-1, BIO-1, and BIO-2, potential direct, indirect, and cumulatively considerable impacts relating to this issue would be reduced to a level of less than significant. (Draft EIR, p. 3.4-50.)

C. CULTURAL RESOURCES

A. Historical Resources

Threshold: Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Findings: Less than significant with mitigation incorporated. (Draft EIR, pp. 3.5-26 through 3.5-29.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: The Project site is undeveloped and there are no buildings present on the Project site that could be considered historical resources under CEQA; therefore, the Project would not have an impact any historical buildings. There are archaeological resources, however, on the Project site that qualify as a historical resource under CEQA. Notably, the Project site is intersected by CA-NAP-406, which is a small site on which 5,711 pieces of lithic debitage, 17 bifaces, one core, seven edge-modified flakes, one hammerstone, 101 charcoal fragments, seven pieces of baked clay, and 40 historical-era artifacts were found. CA-NAP-406 has been determined to be eligible for inclusion in the National Register of Historic Properties ("NRHP") and the California Register of Historic Properties ("CRHP"). Previous investigations evaluating CA-NAP-406, however, were restricted to portions of this resource located west of the Project site. Phase 1 and Phase 2 archaeological excavations, as well as a ground-penetrating radar ("GPR") investigation, were conducted on the Project site, and based on this evidence, no intact deposits or features associated with CA-NAP-406 appear to extent to within the Project site. It is likely that the upper layer of fill present on a majority of the Project site is comprised largely of redeposited and otherwise disturbed cultural deposits associated with CA-NAP-406. Soils identified below the fill were not found to contain cultural deposits or substantial frequencies of cultural material. However, because there is the potential to unearth unknown resources during Project construction, there could be a potentially significant impact to subsurface archaeological resources, absent mitigation. To ensure that any such potential impacts are mitigated to a level of less than significant, the following mitigation measure has been identified:

> ***CUL-1:*** *The City shall require that an archaeological monitor is present during all ground-disturbing activities with the potential to impact previously identified cultural resources or to encounter unanticipated cultural deposits including tribal cultural resources. The determination for*

a Native American monitor to be present shall be made by the City, in consultation with the appropriate Native American tribe prior to the initiation of ground disturbing activities. In addition, prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. Areas observed to have potential to contain yet-identified subsurface cultural material or deposits are located throughout the Project site, but primarily would be in the western portion of the site where the existing vineyard is located. It is anticipated resources would not be present in depths of more than 10 feet below the surface. Archaeological and Native American monitoring may be adjusted at the recommendation of the qualified archaeological principal investigator, meeting the Secretary of the Interior Professional Qualifications for Archaeology, and in consultation with the City, based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material.

The archaeological and tribal monitors shall be provided a copy of technical reports prepared for the Project and pertinent appendices to inform their monitoring efforts. The archaeological and tribal monitors shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until the qualified archaeological principal investigator, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the Tribe. Should it be determined by the Tribe and the archeologist, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. As approved by the City, in consultation with the Tribe this buffer may be adjusted by the Tribe and the archaeological principal investigator to a distance that maintains a protective perimeter around the unanticipated resource, while still allowing for construction to continue in the surrounding area.

Compliance with Mitigation Measure CUL-1 would ensure that proper procedures and protocol are in place in the event a resource is identified. The procedures require work to stop in the event a resource is discovered and require an archaeologist and/or Native American

representative to be contacted to determine the appropriate course of action depending on the resource. For the reasons discussed herein and the reasons discussed in the EIR, compliance with MM CUL-1, along with Public Resources Code section 5097.98, California Health and Safety Code section 7050.5, and State CEQA Guidelines section 15064.5(e), would ensure that potential direct, indirect, and cumulatively considerable impacts relating to this issue would be reduced to a level of less than significant. (Draft EIR, pp. 3.5-26 through 3.5-29.)

B. Archaeological Resources

Threshold: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Findings: Less-than-significant impact with mitigation incorporated. (Draft EIR, pp. 3.5-29 through 3.5-30.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: A Cultural Inventory Report and Extended Phase I and Phase II Reports were prepared for the Project, which explain that three archeological sites were previously identified within the Project site (CA-NAP-406, CA-NAP-843, and CA-NAP-1008), two of which (CA-NAP-843 and CA-NAP-1008) were determined not to be NRHP/CRHR eligible. The Cultural Inventory Report determined that impacts to CA-NAP-843 and CA-NAP-1008 would not represent a significant effect, although appropriate mitigation to account for unanticipated impacts would be required. Resource CA-NAP-406 has been determined to be eligible for CRHR (Criterion 4) and NRHP (Criterion D) listing. The Phase I and Phase II archaeological excavations and GPR investigation did not identify any intact deposits or features associated with CA-NAP-406 within the Project site. However, the Project could result in a potentially significant impact relating to this issue absent mitigation, due to the sensitivity of the site for unknown archeological resources that may be present subsurface that could be unearthed during construction activities. To ensure that any such potential impacts are mitigated to a level of less than significant, the following mitigation measure will be implemented:

> ***CUL-1:*** *The City shall require that an archaeological monitor is present during all ground-disturbing activities with the potential to impact previously identified cultural resources or to encounter unanticipated cultural deposits including tribal cultural resources. The determination for a Native American monitor to be present shall be made by the City, in consultation with the appropriate Native American tribe prior to the initiation of ground disturbing activities. In addition, prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. Areas observed to have*

potential to contain yet-identified subsurface cultural material or deposits are located throughout the Project site, but primarily would be in the western portion of the site where the existing vineyard is located. It is anticipated resources would not be present in depths of more than 10 feet below the surface. Archaeological and Native American monitoring may be adjusted at the recommendation of the qualified archaeological principal investigator, meeting the Secretary of the Interior Professional Qualifications for Archaeology, and in consultation with the City, based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material.

The archaeological and tribal monitors shall be provided a copy of technical reports prepared for the Project and pertinent appendices to inform their monitoring efforts. The archaeological and tribal monitors shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until the qualified archaeological principal investigator, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the Tribe. Should it be determined by the Tribe and the archeologist, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. As approved by the City, in consultation with the Tribe this buffer may be adjusted by the Tribe and the archaeological principal investigator to a distance that maintains a protective perimeter around the unanticipated resource, while still allowing for construction to continue in the surrounding area.

Compliance with Mitigation Measure CUL-1 would ensure that proper procedures and protocol are in place in the event a resource is identified. The procedures require work to stop in the event a resource is discovered and require an archaeologist and/or Native American representative to be contacted to determine the appropriate course of action depending on the resource. For the reasons discussed herein and the reasons discussed in the EIR, compliance with MM CUL-1, along with Public Resources Code section 5097.98, California Health and Safety Code section 7050.5, and State CEQA Guidelines section 15064.5(e), would ensure that potential direct, indirect, and cumulatively considerable impacts relating to this issue would be reduced to a level of less than significant. (Draft EIR, pp. 3.5-29 through 3.5-30.)

C. Human Remains

Threshold: Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Findings: Less-than-significant impact with mitigation incorporated. (Draft EIR, pp. 3.5-30 through 3.5-31.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: A substantial level of archaeological investigation work was conducted to analyze the potential impacts of the Project, including a Cultural Inventory Report, Extended Phase I and Phase II Reports, and a GPR investigation that looked for any subsurface anomalies to a depth of approximately 26 feet below the surface. No human remains have been documented or have been found during the archaeological investigation work conducted for the Project. Nevertheless, due to the high archeological sensitivity of the area around the Project site, it is possible to inadvertently uncover human remains during ground-disturbing Project activities, such as grading and excavation. To ensure that any such potential impacts are mitigated to a level of less than significant, the following mitigation measure will be implemented:

> ***CUL-2:*** *In the event any human remains are unearthed during site disturbing activities, Section 7050.5(b) of the California Health and Safety Code and Section 15064.5(e) of the CEQA Guidelines specifies protocols to follow in the event human remains are discovered. The Code mandates stopping work within 100 feet of the find and contacting the County Coroner to determine the origin of the remains. If the remains are determined to be Native American the Coroner shall contact the Native American Heritage Commission within 24 hours to request that the Commission determine the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent shall be provided with the opportunity to make recommendations regarding the means of treating or disposing of the remains with appropriate dignity. Project-related ground disturbance in the vicinity of the find shall not resume until all statutory requirements have been met and evidence of completion has been submitted to the City, in consultation with the Tribe.*

Implementation of MM CUL-2 provides specific procedures to follow in the event human remains are identified. The procedures require work to stop and the County Coroner contacted to determine the origins of the remains. For these reasons and the reason set forth in the EIR, compliance with MM CUL-2 and with section 7050.5 of the California Health and Safety Code would ensure that the Project's potentially direct, indirect, and cumulative impacts relating to this issue would be reduced to a level of less than significant.

D. GEOLOGY AND SOILS

1. Seismic-Related Ground Failure and Liquefaction

Threshold: Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving seismic-related ground failure, including liquefaction?

Findings: Less-than-significant impact with mitigation incorporated. (Draft EIR, pp. 3.6-21 through 3.6-23.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: Seismic ground shaking is an unavoidable hazard for nearly all man-made facilities (buildings and structures) in the region. The geologic setting means proposed facilities are likely to experience ground shaking from at least one major earthquake (e.g., greater than moment magnitude 6.7) sometime during the operational life of a project. The Project site is also underlain by soils that if not properly engineered during construction site preparation, could be subject to secondary effects such as seismically induced liquefaction, differential settlement or compression. If future development of the site is not constructed in a manner that protects residents from geologic and seismic hazards, the Project could have a significant impact. The City General Plan includes policies to address geological impacts, as does the Municipal Code. Initial geotechnical work for the Project site has identified issues related to liquefaction and identified recommendations to avoid or reduce risks due to liquefaction. To ensure that any such potential impacts are mitigated to a level of less than significant, the following mitigation measure will be implemented:

> ***GEO-1:*** *Prior to the issuance of any site-specific grading or building permits, the Project applicant shall have a design-level geotechnical report prepared and submitted to the City of St. Helena Building Department for review and approval in accordance with adopted City standards. The structural designs shall adhere to the currently adopted version of the California Building Code. The report shall identify specific site preparation methods, grading practices, foundation designs, and other recommendations appropriate for minimizing damage from weak soils, expansive soils, differential settlement, and seismic hazards, including liquefaction. Specifically, the following requirements for the geotechnical and soils report shall be met:*
>
> - *Analysis presented in the geotechnical report shall conduct a detailed evaluation of liquefaction in accordance with California*

Department of Conservation Special Publication 117A: Guidelines for Evaluating and Mitigating Seismic Hazards in California.

- *Additional subsurface soil borings shall be completed as necessary to represent the full range of site conditions, including the southern portion of the parcel mapped as alluvial fan.*

- *Analysis presented in the geotechnical report shall include recommendations for building foundations and improvements, including sidewalks, parking lots, and subsurface utilities, that take into consideration the potential effects of settlement, collapse, and expansive or corrosive soils. This includes the recommendation to over excavate to an average depth of 4.5 feet (and up to 10 feet in the location of the former pond) due to anticipated settlement.*

- *All design criteria and specifications set forth in the design-level geotechnical report shall be implemented as a condition of project approval. This report shall be completed as a condition of approval of the final tentative map.*

Implementation of MM GEO-1 and compliance with the California Building Code would ensure that impacts to relating to seismic ground shaking and liquefaction would be reduced to a level of less than significant. With implementation of MM GEO-1, potential direct, indirect, and cumulatively considerable impacts relating to this issue would be reduced to a level of less than significant. (Draft EIR, p. 3.6-23.)

2. Expansive Soils

Threshold: Would implementation of the Project occur on weak, compressible, and/or expansive soils that could result in adverse impacts on habitable structures?

Findings: Less than significant impact with mitigation incorporated. (Draft EIR, pp. 3.6-24.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: The preliminary geotechnical report prepared for the Project indicated that engineered fill was placed on top of a 3-foot layer of soft, weak natural soil with high moisture content across the Project site, and above uncompacted fill in a former pond area. Over-excavation, moisture-conditioning, and recompaction of the recent fill and the underlying weak soils was recommended to avoid future settlement after development. It is anticipated that placement of engineered fill for use as structural building pads, roads, and within utility trenches (including) over excavation and recompaction would remove and/or otherwise address the preexisting

potential for expansive or corrosive soils. To ensure that any such potential impacts are mitigated to a level of less than significant, the following mitigation measure will be implemented: (Draft EIR, pp. 4.6-24.)

> ***GEO-1:*** *Prior to the issuance of any site-specific grading or building permits, the Project applicant shall have a design-level geotechnical report prepared and submitted to the City of St. Helena Building Department for review and approval in accordance with adopted City standards. The structural designs shall adhere to the currently adopted version of the California Building Code. The report shall identify specific site preparation methods, grading practices, foundation designs, and other recommendations appropriate for minimizing damage from weak soils, expansive soils, differential settlement, and seismic hazards, including liquefaction. Specifically, the following requirements for the geotechnical and soils report shall be met:*
>
> - *Analysis presented in the geotechnical report shall conduct a detailed evaluation of liquefaction in accordance with California Department of Conservation Special Publication 117A: Guidelines for Evaluating and Mitigating Seismic Hazards in California.*
>
> - *Additional subsurface soil borings shall be completed as necessary to represent the full range of site conditions, including the southern portion of the parcel mapped as alluvial fan.*
>
> - *Analysis presented in the geotechnical report shall include recommendations for building foundations and improvements, including sidewalks, parking lots, and subsurface utilities, that take into consideration the potential effects of settlement, collapse, and expansive or corrosive soils. This includes the recommendation to over excavate to an average depth of 4.5 feet (and up to 10 feet in the location of the former pond) due to anticipated settlement.*
>
> - *All design criteria and specifications set forth in the design-level geotechnical report shall be implemented as a condition of project approval. This report shall be completed as a condition of approval of the final tentative map.*

Implementation of MM GEO-1 would ensure that impacts to relating to weak, compressible, and/or expansive soils would be reduced to a level of less than significant. MM GEO-1 requires compliance with California Department of Conservation Special Publication

117A, which ensures that unstable soils would be addressed. With implementation of MM GEO-1, potential direct, indirect, and cumulatively considerable impacts relating to this issue would be reduced to a level of less than significant. (Draft EIR, p. 3.6-24.)

3. Paleontological Resources

Threshold: Would implementation of the Project directly or indirectly destroy a unique paleontological resource or site?

Findings: Less than significant impact with mitigation incorporated. (Draft EIR, pp. 3.6-24 through 3.6-25.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: there are no records of fossil finds within the City, and the Holocene alluvium mapped at the surface has a low potential for paleontological resources. However, there is a slight chance deeper excavations on-site for underground utilities, for example, could encounter Pleistocene age alluvium with the potential for fossils. To ensure that any such potential impacts are mitigated to a level of less than significant, the following mitigation measure will be implemented:

> ***GEO-2:*** *In the event that known or suspected paleontological resources (e.g., fossils) are unearthed during grading or trenching, the area of discovery shall be roped off by the construction contractor to include a 50-foot radius buffer and remain off-limits until cleared by a qualified paleontologist. The Project applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines, who shall be tasked with assessing the significance of the fossil find, including documenting the nature, location, and taxa of the find. The qualified paleontologist shall use his/her professional judgement as to the significance of the find, and whether the find should be preserved in a museum repository. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. Documentation of the fossil find, including appropriate salvage and recovery of fossil specimens and of transfer of to an appropriate repository (e.g., University of California Museum of Paleontology) shall be submitted to the City of St. Helena as evidence of compliance with this mitigation measure.*

MM GEO-2 identifies the appropriate steps if paleontological resources are uncovered during site disturbance. With implementation of MM GEO-2, potential direct, indirect, and cumulatively considerable impacts relating to this issue would be reduced to a level of less than significant. (Draft EIR, p. 3.6-25.)

E. HAZARDS AND HAZARDOUS MATERIALS

1. Upset and Accident Conditions

Threshold: Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Findings: Less than significant with mitigation incorporated. (Draft EIR, pp. 3.8-16 through 3.8-19.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: Due to the historic use of a portion of the site for agricultural uses, specifically an orchard in the late 1940s, there is a potential for contaminated soils to be encountered during construction activities. While the Phase I ESA concludes that it is unlikely that residual levels of pesticides would be present in significant concentrations, the absence of contaminants of concern such as OCPs and arsenic has not been confirmed through on-site soils testing. While potentially significant impacts are not likely, to ensure that any Project impact concerning hazardous materials are mitigated to a level of less than significant, the following mitigation measure has been identified:

> ***HAZ-1:*** *As a condition of approval for construction and grading permits for the Project site, the Project applicant shall ensure the following subsurface soils testing and follow-up analysis shall be performed prior to obtaining a grading permit:*
>
> - *A soils testing work plan shall be developed in accordance with DTSC's Interim Guidance for Sampling Agricultural Properties (DTSC 2008) by an appropriately licensed individual (i.e., professional geologist, engineer, or similar qualification) for the portions of the Project site historically used for agriculture. Special consideration shall be given to targeting site soils that are representative of historic agricultural use, and to avoid sampling recent fill material placed during levee construction. Prior to carrying out soils testing, the work plan shall be submitted to the Napa County Division of Environmental Health (as the Certified Unified Program Agency for all cities and areas of Napa County) and the City of St. Helena for review and approval.*
>
> - *The number of soil samples, sampling methods, compounds tested, background samples (if applicable), and laboratory analyses shall*

be completed in accordance with DTSC's Interim Guidance. Should analytical results exceed naturally occurring concentrations or applicable CHHSLs, the health risks of such a condition shall be evaluated in human health risk assessment as described in DTSC standards and guidance (e.g., preliminary endangerment assessment guidance manual).

- *The risk assessment shall describe measures that must be implemented to ensure potential health risks to construction workers, site residents, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than one in one million for carcinogens and a cumulative hazard index of 1 for non-carcinogens, or as required by the Napa County Division of Environmental Health acting as the Certified Unified Program Agency and/or DTSC oversight.*

- *In the event human health risk assessment shows elevated chemical concentrations pose a risk to human health or the environment, the risks shall be eliminated or substantially reduced by removal (e.g., excavation of soils and off-site disposal) or remediation of contaminated soils, and/or implementation of institutional controls and engineering controls (IC/EC). IC/EC may include use of a construction risk management plan, use of hardscape to cap problem areas, importation of clean soil in landscaped area to eliminate exposure pathways, and/or deed restrictions. If IC/EC are implemented, an Operations and Maintenance Program shall be prepared and implemented to ensure that the measures adopted are maintained throughout the life of the project.*

- *The soil testing report, and if applicable, the human health risk assessment and Operations and Maintenance Program, shall be subject to review and approval by the City of St. Helena Department of Public Works, the Napa County Division of Environmental Health and/or other regulatory oversight agencies.*

Implementation of MM HAZ-1 would ensure that if soils located within the Project site contain pesticides that exceed CHHSLs for residential development and occupancy, such soils would be removed and/or remediated prior to any site disturbance or occupancy. With implementation of MM HAZ-1, a preliminary soil screening survey would ensure that soils on the Project site would comply with CHHHLs for residential development and occupancy ensuring the impact is mitigated to less than significant. With implementation of MM HAZ-2 and compliance

with all applicable federal, state, and regional regulations regarding hazardous materials, potential impacts related to upset and accident conditions involving the release of hazardous materials into the environment would be reduced to a level of less than significant. (Draft EIR, p. 3.8-18).

F. NOISE

1. Local Noise Level Standards

Threshold: Would the Project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Findings: Less than significant with mitigation incorporated. (Draft EIR, pp. 3.11-14 through 3.11-20.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: The Project would not result in significant operational noise impacts in excess of applicable standards. The EIR includes analysis of stationary and mobile (transportation) noise impacts to nearby sensitive receptors. The analysis concluded that the Project's operational activities would not result in a substantial noise increase that would exceed applicable City noise standards noise.

Construction of the Project would generate noise that could expose nearby receptors (residences) to elevated noise levels. The City's Health and Safety Code (Chapter 8.24 of Title 8, the Health and Safety Code) requires noise generating construction activities (including demolition, excavation, and building construction), be restricted to the hours between 8:00 a.m. and 5:00 p.m., Monday through Saturday, and prohibited on Sunday and holidays (City of St. Helena Chapter 8.24). This ensures that sensitive receptors are not disturbed by early morning or late night activities. However, the City's 1993 General Plan includes Implementing Policy 8.3.11, which states "Require construction operations to use noise suppression devices and techniques and limit noisy construction activities to the least noise sensitive times (8 a.m. to 5 p.m., Monday through Friday)." Due to the proximity of residences to the Project site and the potential for construction noise to be an annoyance, the impact is considered potentially significant unless City policies and ordinances are implemented. To ensure that short-term construction noise does not have a significant impact upon residential receptors, the following mitigation measure has been identified:

> ***NOI-1:*** *The Project applicant or its contractors shall implement the following for onsite noise control and sound abatement means that, in aggregate, would yield sufficient construction noise reduction during the site preparation, grading/excavation and building construction phases of the Project to ensure compliance with the FTA-based guidance standard of 90 dBA hourly Leq at or beyond the property lines of the nearest residences, as noted.*

Administrative Controls – At all times during site preparation and construction:

- *Comply with Chapter 8.24 of the Municipal Code with respect to allowable construction periods,*
- *Minimize idling time of onsite equipment, and*
- *Either locate onsite stationary construction equipment (such as generators or air compressors) as far from adjacent residential property boundaries as is feasible, or place this equipment inside an approved noise-attenuating casing (e.g., sound-attenuated air intakes and heat vents, exhaust mufflers, etc.), or place this equipment indoors.*

Engineering Controls – All mobile and stationary construction equipment employing an internal combustion engine shall be equipped with suitable exhaust and intake silencers which are in good working order; and

Install Sound Abatement – During site preparation and construction which involves the operation of more than two pieces of heavy equipment (dozer, backhoe, front-end loader, crane, tractor, etc.) for at least one hour and when operating within 25 feet of the exterior of a residence (either offsite or onsite), do the following:

- *Erect a temporary barrier (i.e., plywood sheet) or install sound blankets (or comparable temporary solid barriers) on the Project's construction fencing, or*
- *Locate sound path intervening containers or trailers onsite to block direct line-of-sight between residences and the operating heavy equipment.*

Implementation of MM NOI-1 would substantially lessen construction noise upon adjacent residences by requiring administrative controls, engineering controls, and/or installation of sound abatement. Installation of an effectively placed storage container or a temporary plywood or blanket barrier on a portion of the site boundary that blocks line-of-sight between the source(s) of noise emission and the receptor of concern (e.g., residence) would be expected to provide a minimum of 3-5 dBA of noise reduction. By way of examples, doubling the distance of an operating generator from a receptor would be expected to yield a 6 dB reduction in noise. Proper engine mufflers installed on construction equipment helps ensure that source sound emission levels are further reduced. Implementation of MM NOI-1 would help minimize construction noise impacts to less than significant. (Draft EIR, p. 3.11-16.)

G. TRIBAL CULTURAL RESOURCES

1. Resources Eligible for Listing in Register of Historical Resources

Threshold: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature,

place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

Findings: Less than significant with mitigation incorporated. (Draft EIR, pp. 3.5-31 through 3.5-32.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: Based on a review of the Cultural Resources evaluation conducted for the Project site and letters provided by the Tribes in response to letters sent by the City pursuant to AB 52, there are no known tribal cultural resources (TCRs) present, as defined in PRC Section 21074, on the Project site or in its immediate vicinity. Due to the sensitivity of the site for unknown archeological resources that could be unearthed during construction activities, it was determined there would also be potential for unknown tribal cultural resources to be encountered during Project. Therefore, implementation of the following mitigation measure has been identified:

> ***CUL-1:*** *The City shall require that an archaeological monitor is present during all ground-disturbing activities with the potential to impact previously identified cultural resources or to encounter unanticipated cultural deposits including tribal cultural resources. The determination for a Native American monitor to be present shall be made by the City, in consultation with the appropriate Native American tribe prior to the initiation of ground disturbing activities. In addition, prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. Areas observed to have potential to contain yet-identified subsurface cultural material or deposits are located throughout the Project site, but primarily would be in the western portion of the site where the existing vineyard is located. It is anticipated resources would not be present in depths of more than 10 feet below the surface. Archaeological and Native American monitoring may be adjusted at the recommendation of the qualified archaeological principal investigator, meeting the Secretary of the Interior Professional Qualifications for Archaeology, and in consultation with the City, based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material.*
>
> *The archaeological and tribal monitors shall be provided a copy of technical reports prepared for the Project and pertinent appendices to*

inform their monitoring efforts. The archaeological and tribal monitors shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until the qualified archaeological principal investigator, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the Tribe. Should it be determined by the Tribe and the archeologist, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. As approved by the City, in consultation with the Tribe this buffer may be adjusted by the Tribe and the archaeological principal investigator to a distance that maintains a protective perimeter around the unanticipated resource, while still allowing for construction to continue in the surrounding area.

While no known TCRs have been identified that may be affected by the Project, implementation of MM CUL-1 would require construction work to stop and a Native American representative contacted (if not already conducting on-site monitoring) if any TCRs are unearthed and appropriate measures to be implemented to evaluate the significance of the find. Compliance with MM CUL-1 would ensure potential impacts would be less than significant. (Draft EIR, p. 3.5-32.)

2. Resources Determined by the Lead Agency

Threshold: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

Findings: Less than significant with mitigation incorporated. (Draft EIR, pp. 3.5-31 through 3.5-32.) Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects as identified in the EIR. (State CEQA Guidelines, § 15091(a)(1).)

Explanation: Based on a review of the Cultural Resources evaluation conducted for the Project site and letters provided by the Tribes in response to letters sent by the City pursuant to AB 52, there are no known tribal cultural resources (TCRs) present, as defined in PRC Section 21074, on the Project site or in its immediate vicinity. Due to the sensitivity of the site for unknown

archeological resources that could be unearthed during construction activities, it was determined there would also be potential for unknown tribal cultural resources to be encountered during Project. Therefore, implementation of the following mitigation measure has been identified:

> ***CUL-1:*** *The City shall require that an archaeological monitor is present during all ground-disturbing activities with the potential to impact previously identified cultural resources or to encounter unanticipated cultural deposits including tribal cultural resources. The determination for a Native American monitor to be present shall be made by the City, in consultation with the appropriate Native American tribe prior to the initiation of ground disturbing activities. In addition, prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. Areas observed to have potential to contain yet-identified subsurface cultural material or deposits are located throughout the Project site, but primarily would be in the western portion of the site where the existing vineyard is located. It is anticipated resources would not be present in depths of more than 10 feet below the surface. Archaeological and Native American monitoring may be adjusted at the recommendation of the qualified archaeological principal investigator, meeting the Secretary of the Interior Professional Qualifications for Archaeology, and in consultation with the City, based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material.*
>
> *The archaeological and tribal monitors shall be provided a copy of technical reports prepared for the Project and pertinent appendices to inform their monitoring efforts. The archaeological and tribal monitors shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until the qualified archaeological principal investigator, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the Tribe. Should it be determined by the Tribe and the archeologist, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. As approved by the City, in consultation with the Tribe this buffer may be adjusted by the Tribe and the*

archaeological principal investigator to a distance that maintains a protective perimeter around the unanticipated resource, while still allowing for construction to continue in the surrounding area.

While no known TCRs have been identified that may be affected by the Project, implementation of MM CUL-1 would require construction work to stop and a Native American representative contacted (if not already conducting on-site monitoring) if any TCRs are unearthed and appropriate measures to be implemented to evaluate the significance of the find. Compliance with MM CUL-1 would ensure potential impacts would be less than significant. (Draft EIR, p. 3.5-32.)

SECTION 3. FINDINGS REGARDING ENVIRONMENTAL IMPACTS NOT FULLY MITIGATED TO A LEVEL OF LESS THAN SIGNIFICANT

The City Council hereby finds that, despite the incorporation of mitigation measures outlined in the EIR and in this Resolution, the following impacts from the proposed Project and related approvals cannot be fully mitigated to a less-than-significant level and a Statement of Overriding Considerations is therefore included herein:

A. TRANSPORTATION

1. Air Quality Management Plan Consistency

Threshold: Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3(b)?

Findings: Significant and unavoidable impact. (Draft EIR, pp. 3.14-40 through 3.14-46.) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR. (State CEQA Guidelines, § 15091(a)(3).) Impacts would remain significant and unavoidable. The Project's significant and unavoidable impact relates to vehicle miles traveled (VMT).

Explanation: The Project's significant and unavoidable impact relates to VMT. The City is using the threshold for residential land uses recommended by the Governor's Office of Planning Research (OPR) in the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018). OPR recommends that a residential project that exceeds a level of 15% below existing VMT per capita would have a potentially significant transportation impact. Existing VMT may be defined as the average for the jurisdiction, or regionally. The City has selected the City of St. Helena as the appropriate basis of comparison. The City's average VMT per capita is 11.34, as estimate by the Solano Napa Activity-Based Model (SNABM). The Project VMT per capita, estimated by SNABM based on the Project location, is 11.37. Based on the applied threshold of significance, a Project VMT above 9.64 is considered significant.

Key factors for VMT are location and regional land use patterns. In other words, VMT correlates to how far residents must travel for work, shopping, and other services. Potential mitigation measures include neighborhood/site design to encourage walking and cycling, transportation demand management (TDM) strategies to reduce commute trips. As discussed in the Draft EIR, the Project includes pedestrian and bicycle network improvements. Generally, employment and retail opportunities are not close enough to the Project site to realize large reduction in automotive travel. It is estimated that the project design may reduce VMT by up to 2.0%. TDM strategies are generally geared towards employment uses, where employers can encourage and incentivize alternative means of commuting. As a residential development, the Project is limited in such measures. The EIR estimates such measures would realize a less than 0.5% reduction in VMT. The Project site is not currently served by the local transit operator. Per the City's 2019 General Plan, transit usage across the City is only 1%. Therefore, even if extension of transit to the Project site were to occur, VMT reduction would be negligible.

For these reasons and the reasons set forth in the EIR, the Project's effect on VMT is a significant and unavoidable impact on both a direct and cumulatively considerable basis. (Draft EIR, p. 3.14-46.)

SECTION 4. FINDINGS REGARDING CUMULATIVE ENVIRONMENTAL IMPACTS

Consistent with CEQA's requirements, the EIR for the Project includes an analysis of cumulative impacts. The City Council hereby finds as follows:

A. AESTHETICS

As discussed in the EIR, cumulative impacts to aesthetic resources would be less than significant. (Draft EIR, pp. 3.1-41 through 3.1-42.) the cumulative context for aesthetics includes the area that comprises the viewshed in which the Project site is visible. There were no cumulatively significant aesthetics impacts identified in the 1993 General Plan EIR or the 2019 General Plan EIR. It was determined that the City's design review process, in combination with General Plan policies would maintain the high-quality visual character of existing and future development, would limit impacts to agricultural lands, and would primarily contain growth within the Urban Limit Line, ensuring that cumulative aesthetic impacts would be less than significant. Thus, there is no existing cumulative impact related to visual character or scenic quality. At a localized level, there are no approved or reasonably foreseeable projects that would be visible from the Project site, with the exception of a single-family residence, accessory dwelling unit and barn under construction to the west of the Project site, which would not result in a cumulative impact.

The Project, along with existing and future development within the City, would contribute to the existing ambient light in the Project vicinity by introducing streetlights, landscape lighting, and interior and exterior buildings lights. The 1993 General Plan EIR found lighting to be a potentially significant impact, which would be reduced to less than significant through compliance with General Plan policies and the design review process. These requirements are incorporated

into MM AES-1, which would ensure that the Project's contribution to a cumulative lighting impact would be less than considerable.

B. AGRICULTURAL AND FORESTRY RESOURCES

As explained in the EIR, the Project will not have a cumulatively considerable impact. Based on the land use conversion table prepared by the California Department of Conservation, between 2014 and 2016, 35 acres of the 30,654 acres of County's Prime Farmland were converted to urban and built-up land. However, overall, Important Farmland in the County increased by 149 acres. The Project site contains less than 6 acres of Prime Farmland and less than 1 acre of Farmland of Statewide Importance that were determined to not be of high quality due to a number of factors detailed in the EIR. In addition, the Project site has long been designated for urban use. The St. Helena 1993 General Plan and also the current 2019 General Plan contains policies regarding the preservation of agricultural lands. For these reasons, the Project would contribute to a cumulative impact related to agricultural resources. No mitigation is required. (Draft EIR, pp. 3.2-13 through 3.2-14.)

C. AIR QUALITY

As explained in the EIR, emissions associated with the Project would not result in a cumulatively considerable contribution to cumulative air quality impacts because the Project's construction-related emissions would not exceed the SCAQMD significance thresholds for criteria pollutants. (Draft EIR, p. 4.2-25.)

The cumulative context of an air pollutant is dependent on the specific pollutant being. Ozone (O_3) precursors are a regional pollutant; therefore, the cumulative context would be existing and future development within the entire SFBAAB. This means that O_3 precursors generated in one location do not necessarily have O_3 impacts in that area. Instead, precursors from across the region can combine in the upper atmosphere and be transported by winds to various portions of the air basin. Consequently, all O_3 precursors generated throughout the air basin are part of the cumulative context.

The geographic scope for the cumulative analysis is Napa County and surrounding areas, which are located within the SFBAAB for O_3. The SFBAAB includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, as well as the southern half of Sonoma County and the southwestern portion of Solano County. The BAAQMD establishes emissions thresholds for regional emissions.

Particulates (fugitive dust and DPM) and TACs would result in localized impacts in close proximity to pollutant sources. There are no other active cumulative projects in the immediate vicinity of the Project site that are anticipated to contribute to localized TAC exposure.

Therefore, the Project would not contribute to a cumulative air quality impact.

D. BIOLOGICAL RESOURCES

For the reasons discussed herein and in the EIR, the Project would not have significant cumulative impacts relating to biological resources with the incorporation of specified mitigation measures. (Draft EIR, p. 3.4-51.)

The geographic context for the analysis of cumulative biological impacts includes the areas contained within the Napa Valley and adjacent foothills (identified as the region), but primarily focused on the area within the city limits. Present and probable future projects within the region (which include, but not limited to, development in the city of St. Helena, Napa County, cities of Calistoga and Napa) are anticipated to permanently remove plant and wildlife resources, which could affect both common and special-status species and their habitat.

The 2019 General Plan Draft Environmental Impact Report (City of St. Helena 2018) notes that development in the City and elsewhere in the cumulative analysis area could cause significant cumulative impacts to nesting raptors and other special-status species; however, these cumulative impacts would be mitigated by compliance with General Plan policies. The Project site is located within an area that has been developed for residential and agricultural purposes and development of this site would not result in the reduction of available habitat, migration corridors, or other essential elements required by special-status species in the region. No special-status species have been documented at the Project site. While the Project would convert approximately 9 acres of potential foraging habitat for raptor species, the area has been disturbed in the past and provides only marginal habitat for burrowing mammal species that are the preferred prey for many resident raptor species. The existing disturbance at the site also greatly limits availability of insect prey for special-status bat species. Additionally, agriculture and natural lands in the vicinity of the city provide greater function and value as foraging habitat for these species. Due to the lack of biological value provided by the Project site, the Project's contribution to any effects on biological resources would be considered negligible. Implementation of MMs BIO-1 through BIO-7, would further reduce the Project's cumulative contribution to regional biological resources impacts. For these reasons, the Project's contribution to any existing cumulative impacts is not considerable.

E. CULTURAL RESOURCES

For the reasons discussed herein and in the EIR, the Project would not contribute to cumulative impacts relating to cultural resources with the incorporation of specified mitigation measures. (Draft EIR, pp. 3.5-32 through 3.5-33.)

The geographic scope of the cumulative impact analysis for the evaluation of potential cumulative impacts on cultural resources is the City of St. Helena.

The 1993 General Plan EIR concluded that the 1993 General Plan could result in substantial adverse changes in the significance of historical resources and would have a significant and unavoidable impact to prehistoric archaeological sites that may contain human remains with religious significance to local Native American groups (City of St. Helena 2010). The 1993 General Plan states that there are a number of historic resources in the City (dating from the mid-nineteenth to mid-twentieth century) vulnerable to incompatible alterations and demolition.

However, the Project site does not include any known historic resources from this time period. The 2019 General Plan EIR concluded that impacts on cultural resources, including historic, archeological and prehistoric associated with buildout of the city would not result in a significant impact. The EIR notes that compliance with 2019 General Plan Policy HR1.5 would minimize or avoid potential impacts on any resources known or not known at this time and that may be encountered in the future. In addition, there are numerous laws, regulations, and statutes, on both the federal and state levels, that seek to protect cultural resources. These would apply to development within and outside the city. However, because the Project site contains a high p for the discovery of unknown subsurface historical or prehistoric resources, the Project's contribution to the cumulative loss of cultural resources is considered potentially significant absent mitigation.

Implementation of MM CUL-1 provides specific procedures to follow in the event a resource is identified. Compliance with this measure, along with PRC Section 5097.98, Section 7050.5 of the California Health and Safety Code, and Section 15064.5(e) of the CEQA Guidelines, would ensure that Project's incremental contribution would be reduced to less than significant and no additional mitigation is required.

F. ENERGY RESOURCES

For the reasons discussed herein and in the EIR, the Project would not have significant cumulative energy impacts. (Draft EIR, pp. 3.15-20 through 3.15-21.)

Other development projects within the region would result in incremental increases in long-term energy consumption similar to the Project through the introduction of new population to the region. Each of these projects, however, would be required to comply with local and state regulations for reducing energy consumption and increasing energy efficiency during operation. Nonetheless, the overall increase in demand for energy resources is a potentially significant cumulative impact. Similar to the Project, cumulative projects would be subject to CALGreen or stricter local regulations which provides energy efficiency standards for commercial and residential buildings. CALGreen would implement increasingly stringent energy efficiency standards that would require the Project and the cumulative projects to minimize the wasteful and inefficient use of energy. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, further reducing the inefficient use of energy. Future development would also be required to meet even more stringent requirements, including the objectives set forth in the AB 32 Scoping Plan (CARB 2017), which would seek to make all newly constructed residential homes zero net energy consumers by 2020, and all new commercial buildings Zero-Net-Energy consumers by 2030. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects. In summary, with adherence to the increasingly stringent building and vehicle efficiency standards the Project would reduce energy consumption and would not contribute to a cumulative impact to the wasteful or inefficient use of energy.

G. GEOLOGY AND SOILS

For the reasons discussed herein and in the EIR, the Project would not have significant cumulative impacts relating to geology and soils. (Draft EIR, p. 3.6-25.)

The geographic scope for the analysis of cumulative geologic and soils-related impacts consists of the Project site, as these impacts depend on the site-specific conditions and features on the Project site, such as soil composition and topography. These site-specific impacts would not combine to create cumulative impacts with other projects occurring elsewhere in the City. Therefore, the Project would not have the potential to contribute to an existing cumulative impact.

The geographic scope for the analysis of cumulative paleontological impacts consists of development slated to occur within the City or Napa County on Pleistocene age alluvium. Cumulative impacts on paleontological resources consider whether the impacts of the Project together with other related projects substantially diminish the number of paleontological resources within the same or similar context or property type.

As discussed in the EIR, the chance of encountering paleontological resources at the site is considered low because there are no records of fossil finds within the City, and the Holocene alluvium mapped at the surface has a low potential for paleontological resources. However, there is a slight chance deeper excavations on-site for underground utilities could encounter Pleistocene age alluvium with the potential for fossils. It is possible that construction of the Project in combination with other cumulative projects in undeveloped areas in the City and County underlain by Pleistocene age alluvium could disturb multiple unknown unique paleontological resources, although unlikely to occur. Due to the size of the Project site and the low likelihood of unearthing any fossils, the Project's contribution to a cumulative paleontological impact would not be considerable.

H. GREENHOUSE GAS EMISSIONS

GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. As discussed above, the Project-related GHG emissions would be less than significant. As such, the Project would not result in a potentially significant cumulative GHG impact. (Draft EIR, p. 3.7-37.)

I. HAZARDS AND HAZARDOUS MATERIALS

For the reasons discussed herein and in the EIR, the Project would not have significant cumulative impacts relating to hazards and hazardous materials. (Draft EIR, pp. 3.8-22 through 3.8-23.)

The cumulative context for the analysis of potential hazardous materials impacts (including hazardous materials usage during construction, exposure to potentially contaminated soils) is generally site-specific, rather than cumulative in nature. Compliance with all applicable federal, state, and local regulations related to hazards and hazardous materials on a project-by-project basis

would be required for all projects within the City. Therefore, these issues are not addressed in the cumulative impact analysis.

Hazardous materials incidents or accidents would also typically be site-specific and would involve accidental spills or inadvertent releases. The effects of such incidents, then, would not be additive to effects from other, similar incidents occurring elsewhere. Associated health and safety risks generally would be limited to those individuals using the materials or to persons in the immediate vicinity of the materials. Therefore, these issues are not addressed in the cumulative impact analysis.

The cumulative context for the use, handling, storage, and transport of hazardous materials is buildout of the City. This geographic scope is selected because (1) cumulative hazardous effects generally require proximity, and (2) City personnel are the first responders to hazardous accidents within the vicinity of the Project site.

The City's 1993 General Plan determined that the routine use and transport of hazardous materials would be a potentially significant impact. However, the City's 2019 General Plan Draft EIR (City of St. Helena 2018) was reviewed and it concluded that the routine use and transport of hazardous materials, hazardous materials use near schools, emergency response, and wildfire hazards were less than significant based on the implementation of existing and applicable laws and regulations.

Therefore, compliance with applicable hazardous materials management laws and regulations adopted at the federal, state, and local level would ensure the Project's contribution to cumulative impacts would be less than considerable.

J. HYDROLOGY AND WATER QUALITY

For the reasons discussed herein and in the EIR, the Project would not have significant cumulative impacts relating to hydrology and water quality. (Draft EIR, pp. 3.7-47 through 3.7-49.)

The cumulative context for the analysis of potential water quality impacts related to surface water is the Upper St. Helena Reach subwatershed. This is because stormwater discharges originating from this area could combine with those of the Project to result in an increase in non-point source pollution discharging into the Napa River upstream of Sulphur Creek. Such increases could result from a combination of construction activities, greater use intensity, increased coverage of impervious surfaces and/or increased use of routine household cleaners and landscape chemicals. New development and/or redevelopment projects in these locations have the potential to generate impacts related to the violation of water quality standards, Basin Plan water quality objectives, and/or TMDLs established for the Napa River.

For groundwater resources, the cumulative context is the Napa Valley Groundwater Subbasin (Subbasin) Development of past, present and reasonably foreseeable projects within this area that results in an increase in groundwater demand could result in impacts related to depletion

of the underlying aquifer, regional lowering of the groundwater table level, or depletions of interconnected surface waters.

Due to the residential nature of the Project and compliance with mandatory existing state and local requirements to ensure protection of water quality in the subwatershed and the Subbasin, the Project's contribution to this potentially significant cumulative impact is less than considerable.

As discussed in the EIR, the rates of groundwater pumping have not exceeded the sustainable yield of the Subbasin. The City has implemented actions to ensure the groundwater Subbasin continues to operate within its sustainable yield. The City's 2011 Water Neutral Policy for Development requires all new development to be water-neutral, through a combination of on-site water conservation measures, off-site retrofitting and use of well water, as allowed. Future development in the City is not expected to result in an increase in total water demand because new development is required to offset new demand with water conservation retrofits of existing facilities, or in-lieu payments to the City to carry out any retrofit projects. In addition, as discussed in the EIR, the on-site agricultural well is expected to yield 350 gpm (as reported by the Project applicant) and demonstrated an ability to pump at a rate of 40 gpm over a 24-hour period with negligible drawdown, which is far more capacity than the 10.6 gpm the Project would require for on-site irrigation. Based on the findings of the well capacity and sustainability test, this rate of pumping would have a highly localized radius of influence, if any, and would be greatly overshadowed by the radius of influence associated with the agricultural and municipal supply wells in the surrounding vicinity. Therefore, given Napa County's active management of the Subbasin under the Sustainable Groundwater Management Act, available information, and the City's implementation of a water neutral development policy, the Project's contribution to a cumulative impact with regard to groundwater is not considerable

As the Project does not have impacts with regard to flooding (since the potential impact is eliminated through use of the off-site detention basin), it would not contribute to any cumulative flooding impacts in the subwatershed.

For the reasons above and explained in the EIR, the Project would not have a considerable contribution to cumulative hydrology and water quality impacts.

K. LAND USE

The Project would not physically divide an established community, and it would not have any incremental impact towards physically dividing an established community; the Project would have no cumulative impacts in this regard. Moreover, the Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Again, the Project would have no cumulative impacts in this regard. For these reasons and the reasons discussed in the EIR, the Project would not have significant cumulative impacts relating to land use. (Draft EIR, pp. 3.18-19.)

L. MINERAL RESOURCES

The Project would not impact any mineral resources, as no mineral resources have been identified in or around the Project site, and none of the Project site's previous uses relate to mining activities or mineral processing. (Refer to Notice of Preparation issued March 6, 2018).) The Project would not have any significant cumulative impacts on mineral resources.

M. NOISE

For the reasons discussed herein and in the EIR, the Project would not have significant cumulative impacts relating to noise. (Draft EIR, pp. 3.11-20 through 3.11-21.)

Construction activities associated with proposed or future development within the area would contribute to cumulative noise levels, but in a geographically limited and temporary manner. As other development occurs in the area, noise from different types of uses (e.g., traffic, aircraft, fixed noise sources) would continue to combine, albeit on a localized basis, to cause increases in overall background noise conditions within the area. As a result, such sources do not significantly contribute to cumulative noise impacts at distant locations and are not evaluated on a cumulative level.

Non-transportation noise sources (e.g., those associated with Project operation, which for residential properties include HVAC equipment and landscape maintenance activities) and construction noise impacts are typically project-specific and highly localized (i.e., these do not generally affect the community noise level at distances beyond several hundred feet). These noise sources do not significantly contribute to cumulative noise impacts.

The cumulative context for traffic noise is the traffic volume increases resulting from the Project along with buildout of the 1993 General Plan, and the anticipated increase in traffic volumes along local roadways. The traffic analysis assumed a cumulative context of transportation impacts resulting from the Project along with buildout of the 2019 General Plan. The evaluation concluded that roadway traffic levels would not reach significant levels when compared against existing roadway traffic noise levels. Therefore, the Project's contribution to existing cumulative noise would not be considerable

N. POPULATION AND HOUSING

The Project would not induce substantial unplanned population growth in the area and would not contribute to a cumulative growth impact. While the Project does entail residential development and would result in population growth, the population growth is not unplanned. The Project site was designated for future residential development in the City's 1993 General Plan and 2019 General Plan, and the Project site is located within the City's Urban Limit Line with access to existing utilities. The Project would not demolish existing housing or displace residents and would not contribute to a cumulative impact. (Draft EIR, pp. 4-3 through 4.6.)

O. PUBLIC SERVICES AND RECREATION

Development of the Project would contribute to a cumulative increase in demand for public services and parks and recreational facilities. New fire and police personnel and facilities as well new schools and parks and recreation facilities may be required for 1993 General Plan buildout conditions. This could result in the need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives. However, future development within the City would be required to comply with policies set forth in the City's 1993 General Plan (and now the updated 2019 General Plan) and pay applicable development impact fees as specified in Chapter 3.32, Development Impact Fees, of the City's Municipal Code.

The City recently updated its General Plan in 2019, and the 2019 General Plan EIR notes that the SHFD and the SHPD does not anticipate the need to increase staffing levels or construct any new facilities in order to provide service for future population growth. The projected addition of residents and employees by 2040 (including development of the Project site) would likely increase the demand for emergency fire and police response and preventive services; however, the increase is modest and not expected to create a need for new or expanded fire or police protection facilities and impacts were determined to be less than significant. Therefore, the Project's contribution would not be considerable.

The 2019 General Plan notes that the projected addition of residents and employees by 2040 (including development of the Project site) would likely increase the need for more parks and recreation facilities; however, the impact was determined to be less than significant. As discussed above, the Project would comply with all applicable City goals and policies and pay applicable fees. The Project's incremental contribution to the cumulative increase in demand is considered less than considerable. (Draft EIR, pp. 3.12-17 through 3.12-18.)

P. TRANSPORTATION

As set forth in the EIR, the Project will have a significant and unavoidable cumulative VMT impact. (Draft EIR, pp. 3.14-51 through 3.14-52.)

The VMT analysis considers both existing conditions, and cumulative year 2040 conditions. The analysis concluded that the Project would result in both a direct (existing plus Project) and cumulative (year 2040 Buildout plus Project) impact. For the reasons discussed above, feasible mitigation measures are not available that would reduce this impact to less than considerable. This cumulative impact is significant and unavoidable.

Q. TRIBAL CULTURAL RESOURCES

For the reasons discussed herein and in the EIR, the Project would not contribute to cumulative impacts relating to tribal cultural resources with the incorporation of specified mitigation measures. (Draft EIR, pp. 3.5-33 through 3.5-34.)

The geographic scope of the cumulative impact analysis for the evaluation of potential cumulative impacts on tribal cultural resources is the City of St. Helena.

The 1993 General Plan EIR determined that there would be a significant and unavoidable impact to prehistoric archaeological sites that may contain human remains with religious significance to local Native American groups. However, the City of St. Helena General Plan Update EIR identified that development under the City's 2019 General Plan would result in less-than-significant impacts to TCRs. Policy HR1.5 in the 2019 General Plan would minimize or avoid potential impacts on any resources known or not known at this time that may be encountered in the future and would promote coordination with Native American tribes if any tribal resources are discovered at development sites. The impact on Native American tribal cultural resources was therefore determined to be less than significant.

Numerous laws, regulations, and statutes, on both the federal and state levels, seek to protect cultural resources. These would apply to development within and outside the city. In addition, General Plan policies are designed to safeguard cultural resources from unnecessary impacts. Because all significant tribal cultural resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resource base. Although unlikely, there is the potential the Project could adversely affect significant tribal cultural resources that are unique and non-renewable members of finite classes if discovered contributing to a potentially considerable contribution. Therefore, the Project's incremental contribution to the cumulative loss of cultural resources is considered potentially significant.

Implementation of MM CUL-1 provides specific procedures to follow in the event a resource is identified. Compliance with this measure, along with PRC section 5097.98, section 7050.5 of the California Health and Safety Code, and section 15064.5(e) of the CEQA Guidelines, would ensure that Project's incremental contribution would be reduced to less than considerable additional mitigation is required.

R. UTILITIES

The Project would not contribute considerably to a cumulative utilities impact. (Draft EIR pp. 3.13-35 through 3.13-37.)

The cumulative context for utilizes is buildout of the General Plan. Both the 1993 General Plan EIR and the 2019 General Plan EIR determined that cumulative impacts associated with buildout of the City related to utilities would be less than significant.

In order to ensure that the City's future water demand is met by its supplies, the City established a water-neutral policy, which requires all new development to completely offset its water use. With the implementation of this water-neutral policy and other water conservation measures in the City, the City has determined that future water demand is not expected to exceed the 1,950 acre-feet annual use policy limit set by the Safe Yield Committee. As discussed in the EIR, the Project would comply with the City's water-neutral policy by completing offsetting its

water use from the City through the use of water conservation measures and the on-site well for landscape irrigation. Additionally, future development in the City would be required to pay for public improvements related to water projects.

As discussed in the EIR, the City's wastewater treatment plant ("WWTP") has capacity to accommodate Project wastewater flows for treatment. The City has concluded that WWTP should be expanded to accommodate projected 2030 flows. The Project, and other cumulative projects, pay development fees to fund this planned expansion. The Project would pay its fair share of the planned expansion and would contribute a minimal portion of projected flows.

As discussed in the Final EIR, the existing wastewater collection system has a peak wet weather flow capacity issue to the south of the Project site, which results in some overflow of the wastewater system during wet weather events, due to inflow and infiltration. The Project would contribute only 0.5% of peak wet weather flows to this impacted section of the collection system (Carollo Engineers, June 24, 2022). This amount would not considerably increase the existing cumulative inflow and infiltration issue. The system can accommodate the Project during average dry weather flows. The City's Wastewater Master Plan has identified a capital project to address this existing issue, known as WWGM-6. The Project, through required development fees would contribute its fair share to fund capital improvement projects.

The Project includes a stormwater detention basin that has been sized to accommodate runoff resulting from development of the Project site. As described in the EIR, the Project's contribution of stormwater would not contribute to a cumulatively considerable impact on stormwater and drainage facilities within the City.

The Project would not contribute to a cumulative impact for solid waste disposal. The Clover Flat Landfill has enough capacity to remain open until 2047. As described in the EIR, the Project would generate approximately 0.55 tons per day during the 6-year construction period, which is less than 0.1% of the landfill's average unused daily capacity, and 0.225 tons per day of solid waste during operation, which is 0.04% of the average unused daily capacity of the Clover Flat Landfill.

For the reasons discussed herein and in the EIR, the Project would not have significant cumulative impacts relating to utilities.

S. WILDFIRE

The Project is not located in or near a state responsibility area or on land classified as a very high fire hazard severity zone. For these reasons and the reasons discussed in the EIR, the Project would not have a significant cumulative impact relating to wildfires. (Draft EIR, p. ES-3.)

SECTION 5. FINDINGS REGARDING SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2 (d) of the CEQA Guidelines requires a discussion of any significant irreversible environmental change that would be caused by a project. Generally, a project would result in significant irreversible changes if:

- The primary and secondary impacts would generally commit future generations to similar uses (such as highway improvement that provides access to a previously inaccessible area);
- The project would involve a large commitment of nonrenewable resources (CEQA Guidelines Section 15126.2(d));
- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project;
- The project would involve a large commitment of nonrenewable resources; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Implementation of the Project would result in the long-term commitment of resources of the Project site to urban land use. These irreversible impacts, which are unavoidable consequences of urban growth, are described in the EIR. (Draft EIR, pp. 4-2 through 4-3.) Future development of the Project site would likely result in or contribute to the following irreversible environmental changes:

- Conversion of undeveloped land currently partially used as a vineyard. Approximately 16.9 acres of undeveloped land would be converted to urban uses, thus precluding other alternate land uses in the future.
- Irreversible consumption of energy and natural resources associated with the future use of the site.

Development of the Project would result in the commitment of the Project site to urban development, thereby precluding other uses for the lifespan of the Project. Restoration of the site to pre-developed conditions would not be feasible given the degree of disturbance, the urbanization of the area, and the level of capital investment.

Resources that would be permanently and continually consumed by Project implementation include water, electricity, natural gas, and fossil fuels. Wood products, asphalt, and concrete would be used in construction along with gas and diesel fuel. With respect to

operational activities, compliance with all applicable state and local building codes, as well as mitigation measures, planning policies, and standard conservation features, would ensure that resources are conserved to the maximum extent possible. The Project would incorporate a number of sustainable practices that reduce the consumption of energy and water. Nonetheless, construction activities related to the Project would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline and diesel for automobiles and construction equipment.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by environmental accidents associated with the Project. While the Project would result in the use, transport, storage, and disposal of minor amounts of hazardous materials during Project construction and operation, as described in the EIR, all such activities would comply with applicable local, state and federal laws related to the use, storage and transport of hazardous materials, which significantly reduces the likelihood and severity of accidents that could result in irreversible environmental damage. The Project itself does not include any uniquely hazardous uses that would require any special handling or storage. Further, the Project does not contain any industrial uses that would use or store acutely hazardous materials.

Implementation of the Project would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts include the use of non-renewable and/or slowly renewable natural and energy resources, such as lumber and other forest products and water resources during construction activities. Operations associated with future uses would also consume natural gas and electricity.

SECTION 6. FINDINGS REGARDING GROWTH-INDUCING IMPACTS

As required by section 15126.2(e) of the CEQA Guidelines, an EIR must discuss ways in which a project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, the stimulation of economic activity within the region, or the establishment of policies or other precedents that directly or indirectly encourage additional growth. Under CEQA, this growth is not to be considered necessarily detrimental, beneficial, or of significant consequence. Induced growth would be considered a significant impact if it can be demonstrated that the potential growth, directly or indirectly, significantly affects the environment.

In general, a project could foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of new access to an area, or a change in zoning or General Plan amendment approval), or economic expansion or growth occurs in an area in response to the project (e.g.,

changes in revenue base, employment expansion). These circumstances are further described below.

Elimination of Obstacles to Growth: This refers to the extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity (e.g., constructing new roads or extending public utilities), or removes regulatory constraints that could result in growth unforeseen at the time of project approval.

Economic Effects: This refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic effects can include such effects as the "multiplier effect." A "multiplier" is an economic term used to describe interrelationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the on-site employment and population growth of each project is not the complete picture of growth caused by the project.

Elimination of Obstacles to Growth

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing effect, though not necessarily a significant one. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth. Because the Project site is located within the City's Urban Limit Line and existing services are stubbed to the site, elimination of obstacles to growth is not a factor for this Project.

Removal of Infrastructure Limitations or Provision of Capacity

The elimination of physical obstacles to growth is considered a growth-inducing effect, although not necessarily a significant one. The physical constraints to growth in the vicinity of the Project site include existing residential development to the south, southwest, west and southeast, which would preclude development immediately to the south, southwest, and southeast of the site, and existing office uses to the west, which would preclude inducing growth to the west of the site. Utility infrastructure is also stubbed to the site so no off-site connections would be required. The connection to existing City infrastructure to serve the Project site would not induce growth in this area. Due to the location of the Project site within the City's Urban Limit Line and access to utilities, the Project would not eliminate any constraints that are currently obstacles to growth in this portion of the City that would hasten development of this area.

The City's Residential Growth Management System is no longer enforceable due to the passage of SB 330 (see Gov't Code sec. 66300) otherwise known as the Housing Crisis Act of 2019. This act prevents cities from establishing or implementing any provision that imposes a limit

on the number of housing units that can be approved or constructed annually or for some other period. Therefore, the City can no longer limit residential growth to approximately two percent per year (no more than nine building permits for market rate housing could be issued each year), while providing for both market rate and affordable housing units (Municipal Code Chapter 17.152).

Economic Effects

Implementation of the Project would affect the local economy through the construction of new residences that would require construction workers during the short-term and would encourage people to either relocate or move to the City to take advantage of proximity to local shops, restaurants, and other amenities in nearby downtown.

Additional local employment can be generated through the multiplier effect. The multiplier effect tends to be greater in regions with larger, diverse economies due to a decrease in the requirement to import goods and services from outside the region.

Two different types of additional employment are tracked through the multiplier effect. *Indirect* employment includes those additional jobs that are generated through the expenditure patterns of direct employment associated with the Project. Indirect jobs tend to be in relatively close proximity to the places of employment and residence.

The multiplier effect also calculates *induced* employment. Induced employment follows the economic effect beyond the expenditures of the residents within a project area to include jobs created by the stream of goods and services necessary to support residences within the Project site. When a manufacturer buys or sells products, the employment associated with those inputs or outputs are considered *induced* employment.

For example, when an employee of the Project goes out to lunch, the person who serves the employee lunch holds a job that is *indirectly* related to the Project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered *induced* employment.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees and residents who support the employees of the Project.

Increased future employment generated by employee spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this physical space and its specific location that will determine the type and magnitude of environmental impacts of this additional economic activity. Although the economic effect can be predicted, the actual environmental implications of this type of economic growth are too speculative to predict or evaluate, since they can be spread throughout the City, Napa County, and beyond.

Impacts of Induced Growth

The growth induced directly and indirectly by the Project could contribute to the environmental impacts, in the City and the County, as well as the greater regional area. Any such environmental effects, however, are too diffuse and speculative to predict or describe with any particularity.

Indirect and induced population growth in the City would further contribute to the loss of open space because it would encourage the conversion of undeveloped land to urban uses for additional housing and infrastructure. However, it is assumed this new growth would occur within areas of the City designated and zoned for development or planned for potential future urban development. The City has designated areas for future development in order to protect areas of active agriculture, also within the incorporated City but outside of the Urban Limit Line. Again, however, the particular open space that might get converted cannot be predicted with any certainty, all such conversions to urban land use would occur within areas planned for growth designated in the City's General Plan. Development of the property to the north of the Project site is outside of the City's Urban Limit Line and would require a general plan amendment and compliance with CEQA to evaluate potential impacts.

In summary, although the Project can be said to induce growth, the consequences of such growth-inducement are too speculative to meaningfully predict and, furthermore, due to the designation of the Project site for future residential development in the City's 1993 General Plan and 2019 General Plan[1], implementation of the Project would not be considered growth inducing. (Draft EIR, pp. 4-3 through 4-6.)

SECTION 7. FINDINGS REGARDING ALTERNATIVES

The EIR analyzed three alternatives to the Project as proposed and evaluated these alternatives for their ability to avoid or reduce the Project's significant environmental effects while also meeting the majority of the Project's objectives.

A. PROJECT OBJECTIVES

The following objectives have been established for the proposed Project:

- Subdivide the site consistent with the City's General Plan and Zoning for the site to accommodate residential development.
- Provide opportunities to develop a variety of housing types, including multi-family, single-family, and accessory dwelling units, affordable to a range of incomes including, very low, low and moderate-income households.

[1] Also known as the "St Helena General Plan Update 2040," the 2019 is referred to in this EIR by the year of its adoption.

- Provide opportunities to contribute to the provision of workforce and affordable housing consistent with the City's adopted Housing Element and the Regional Housing Needs Assessment (RHNA) approved by the Association of Bay Area Governments (ABAG).
- Minimize traffic-related environmental impacts, such as noise, air quality and greenhouse gases by lowering commute patterns for St. Helena workers by providing more local housing opportunities.
- Support alternative transportation by providing a pedestrian and bicycle linkages through St. Helena, eventually connecting the regional Vine Trail from Calistoga to the Vallejo Ferry.
- Exceed the City's green building ordinance (Municipal Code Chapter 15.53) and incorporate sustainable design features including water conservation measures, drought resistant landscaping with low flow watering systems, south and west side tree placement to reduce reliance on air conditioning units, and pre-wiring for photovoltaic systems.
- Implement the General Plan Circulation Element by completing the planned extension of Starr Avenue and the partial planned extension of Adams Street from where Adams Street terminates to connect to the Project site.
- Minimize City water use by continuing the use of an existing on-site water well for irrigation of Project landscaped areas.

B. ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

One of the requirements for an alternatives analysis that is set forth in the CEQA Guidelines is identification of alternatives that were considered by the lead agency but rejected as infeasible during the scoping process. As stated in section 15126.6(c) of the CEQA Guidelines, the EIR should briefly explain the reasons underlying this determination. Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are:

1. Failure to meet most of the basic project objectives,
2. Infeasibility, or
3. Inability to avoid significant environmental impacts (CEQA Guidelines section 15126.6(c))

Section 15126.6(f)(1) of the CEQA Guidelines states that, "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or

otherwise have access to the alternative site (or the site is already owned by the proponent)." However, as stated in this subsection, no single factor establishes a fixed limit on the scope of reasonable alternatives.

An alternate site or off-site alternative was determined to be infeasible for the Project because the Project applicant owns the Project site and it would not be feasible to acquire, control or otherwise have access to a new property within the City large enough to accommodate the Project. Therefore, an off-site or alternate Project location was dismissed from further evaluation.

A reduced density alternative was considered but dismissed because it does not avoid or reduce any potentially significant impacts and would not avoid any health and safety concerns required for the City to make findings under section 15041 of the CEQA Guidelines and Government Code section 65589.5(j). In addition, a reduced density alternative is discouraged by Public Resources Code section 21159.26, if other feasible alternatives exist.

Lastly, a mixed-use alternative that includes commercial uses in addition to residential was also considered and dismissed because it would not be consistent with the underlying land use designation and zoning and would require a General Plan Amendment and rezone. An alternatives analysis is not required to consider alternatives that would require changes to the applicable General Plan. Therefore, this alternative was considered but ultimately dismissed from further review. (Draft EIR, pp. 5-3 through 5-4.)

C. ALTERNATIVES SELECTED FOR ANALYSIS IN THE EIR

1. **No Project/No Development Alternative**

Description: Alternative 1: No Project/No Development Alternative ("No Project Alternative") The No Project/No Development Alternative considers the effects of forgoing the Project entirely and leaving the Project site in its current undeveloped condition. Under the No Project/No Development Alternative, the Project would not be approved or constructed. This alternative serves to compare the environmental effects of the Project with an alternative that would leave the property in its existing state. (Draft EIR, p. 5-6.)

Impacts: The No Project/No Development Alternative would produce no changes on the Project site, because the site would remain in its current undeveloped condition, effectively eliminating the Project impacts discussed in the EIR. (Draft EIR, pp. 5-6 through 5-7.)

Objectives and Feasibility: The No Project Alternative would not achieve any of the Project's objectives. (Draft EIR, p. 5-6.)

Finding: The City Council rejects the No Project/No Development Alternative on the following grounds: (1) this alternative fails to meet any of the Project objectives; and (2) potentially conflicts with the Housing Accountability Act (Gov't Code section 65589.5) which was enacted to increase the approval and construction of new housing for all economic segments of California's communities by meaningfully and effectively curbing the capability of local

governments to deny, reduce the density for, or render infeasible housing development projects that are consistent with objective local development standards and contribute to meeting housing need. Therefore, the No Project/No Development Alternative is eliminated from further consideration.

2. No Project/General Plan Alternative

Description: Under this alternative, it is assumed the Project would be developed consistent with the underlying MDR land use designation and MR zoning which allows development of the Project site with residential uses up to a maximum density of 12 dwelling units/acre (du/ac) under the 1993 General Plan MDR designation which was revised to 16 du/ac under the 2019 General Plan consistent with the MR zoning, which permits a maximum density of 16 du/ac. For the purposes of this alternative a density of 9 du/ac was assumed for a total of 152 single-family residential units. Based on the number of units this alternative would result in a population of 372 residents, an increase of 159 residents as compared to the Project. It is assumed Starr Avenue and Adams Street would both be extended to connect to the Project site and the street and lot layout would be very similar to the Project with the exception of the 3.4-acre portion of the site currently designated for multifamily units (Lot 52). This portion of the Project site would be configured to accommodate single-family residences. (Draft EIR, p. 5-7.)

Impacts: Due to the denser development and increased number of residential units, it is anticipated that impacts associated with air quality, greenhouse gases, energy, public utilities, population and housing, and noise would be increased. It is anticipated the same mitigation measures for impacts to nesting birds and bats (biological) and the potential to unearth any previously unknown historic, archeological, or paleontological resource (cultural, geology and soils), potential soil contamination from agricultural chemical residues (hazards), and noise from construction equipment would be still be required. No potentially significant impacts associated with the Project would be avoided or reduced. (Draft EIR, pp. 5-7 through 5-11.)

Objectives and Feasibility: The No Project/General Plan Alternative would develop the site consistent with the underlying land use designation and zoning assuming ag a density of 9 du/ac and would complete the planned extensions of Adams Street and Starr Avenue. However, this alternative would not achieve the Project objective of developing a variety of housing types, including multifamily housing and ADUs. Housing would be less affordable to a range of incomes since development would be limited to single-family homes. This alternative would not minimize traffic-related environmental impacts due to the increase in units and residents. Overall, this alternative would not meet most of the Project objectives. (Draft EIR, p. 5-11.)

Finding: The City Council rejects the No Project/General Plan Alternative on the following grounds, each of which individually provides sufficient justification for rejection of this alternative: (1) this alternative does not avoid the Project's significant and unavoidable impacts on the environment; and (2) this alternative meets the Project objectives to a lesser extent than the

Project. Therefore, the No Project/General Plan Alternative is eliminated from further consideration.

3. Park/Open Space Preserve Alternative

Description: The Park Preserve/Open Space Alternative includes an approximately 1-acre park/open space that would preserve a majority of the on-site wetlands to help lessen impacts to seasonal wetlands (Impact 3.4-2), as shown on Figure 5-1, Park Preserve Alternative. To accommodate the park three lots would need to be removed (Lots 44, 45, 46) and vegetated swales to capture runoff would be located adjacent to developed areas. It is anticipated the park would be landscaped with native plants and may include a small tot lot or be left as passive open space. The remaining approximately 16-acres would be developed with approximately the same number of residential units as the Project and would maintain a density of 5.1 du/ac. The single-family lots would be slightly smaller than the Project and there could be an increase in the number of multifamily units. Site access and internal roads would essentially be the same as the Project. The same number of residents, 213, is conservatively assumed under this alternative, the same as the Project. (Draft EIR, p. 5-11.)

Impacts: With implementation of this alternative, the impact to seasonal wetlands would be less severe than the Project. The Park Preserve/Open Space Alternative includes an approximately 1-acre park that would preserve two of the larger wetland features to help reduce the impacts to jurisdictional waters. The area of impacted wetlands would be reduced to .006 acres rather than 0.07 acres from the Project. All other impacts are anticipated to be similar to the Project. No significant and unavoidable impacts would be avoided. (Draft EIR, pp. 5-12 through 5-13.)

Objectives and Feasibility: The Park Preserve/Open Space Alternative would still manage to achieve all stated Project objectives. The main changes from this alternative would be a small decrease in the residential footprint and the avoidance of seasonal wetlands at the Project site. This alternative would still subdivide the site consistent with the underlying land use designation and zoning, complete the planned extensions of Adams Street and Starr Avenue, provide a variety of housing types, including affordable housing, and provide more local housing opportunities. (Draft EIR, pp. 5-13 through 5-14.)

Finding: The City Council rejects the Park Preserve/Open Space Alternative on the following grounds, each of which individually provides sufficient justification for rejection of this alternative: (1) this alternative does not avoid the Project's significant and unavoidable impacts on the environment; (2) maintenance of isolated wetlands/open space represents an ongoing financial burden on the City; and (3) isolated wetlands offer little habitat value, whereas off-site mitigation may result in higher value habitat with greater connectivity being preserved. Therefore, the Park Preserve/Open Space Alternative is eliminated from further consideration.

4. Increased Density/Affordable Housing Alternative

Description The Increased Density/Affordable Housing Alternative includes the approximately 1-acre park to preserve a majority of the on-site seasonal wetlands with the remaining approximately 16-acres designated for up to 180 affordable housing units, assuming a density of 11.3 dwelling units per acre (du/ac) under the existing Medium Density Residential (MDR) land use designation (current zoning allows for a maximum density of 16.0 du/ac). The units would be attached housing (duplex or triplex) and would be 100% affordable. It is assumed buildings would be no taller than 30-feet, consistent with the underlying MR zoning. Under the technical guidance issued by OPR, a 100% affordable housing project is exempt from the requirement to calculate VMT. Site access and internal roads would essentially be the same as the Project. Using the City's persons per household factor of 2.45 people per unit for medium/higher density residential land uses this alternative would generate 441 residents, an increase of 194 residents as compared to the Project. (Draft EIR, p. 5-14.)

Impacts: Due to the increase in residents, it is anticipated the increase in air pollutants and GHG emissions associated with operation would be slightly higher than the Project due to the increase in vehicle trips, as well as the demand for water supply, wastewater conveyance and treatment, schools, solid waste disposal, and energy. Construction and footprint-related impacts associated with biological, cultural, and geological resources, hazardous materials, and noise would essentially be the same as the Project, as these impacts would be less-than-significant with mitigation. It is anticipated the same mitigation measures for impacts to bats, and nesting birds (biological) and the potential to unearth any previously unknown historic, archeological, or paleontological resource (cultural, geology and soils), and potential soil contamination from agricultural chemical residues (hazards) would be still be required. This alternative would minimize impacts to on-site seasonal wetlands with inclusion of the 1-acre park, similar to the Park Preserve/Open Space Alternative. As a 100% affordable housing project, this Alternative would avoid the significant and unavoidable impact related to VMT. (Draft EIR, pp. 5-14 through 5-17.)

Objectives and Feasibility: The Increased Density/Affordable Housing Alternative would subdivide the site consistent with the underlying land use designation and zoning, would complete the planned extensions of Adams Street and Starr Avenue, and would contribute to the provision of workforce and affordable housing objective. However, this alternative would not achieve the Project objective of developing a variety of housing types, including single-family and ADUs. The housing would be affordable to a range of incomes including, very low, low and moderate-income households, but would not include any single-family or market rate homes. This alternative generally meets a majority of the Project objectives but not all of the objectives. (Draft EIR, p. 5-20.)

Finding: The City Council rejects the Increased Density/Affordable Housing Alternative on the following grounds, each of which individually provides sufficient justification for rejection of this alternative: (1) maintenance of isolated wetlands/open space represents an ongoing financial burden on the City; (2) isolated wetlands offer little habitat value, whereas off-site mitigation may result in higher value habitat with greater connectivity being preserved; and (3) the Alternative

does not meet the Project objectives to provide a variety of housing types, including single family, and accessory dwelling units. Therefore, the Park Preserve/Open Space Alternative is eliminated from further consideration.

D. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Project/No Development alternative is the environmentally superior alternative. It would avoid all Project-related environmental impacts. CEQA Guidelines section 15126.6(e)(3)(A) requires that when the No Project alternative is environmentally superior, another alternative be selected as the environmentally superior alternative. The environmentally superior alternative would be the Park Preserve alternative. This alternative would reduce Impact 3.4-2 by developing a passive park surrounding three out of four of the site's jurisdictional wetlands. However, this alternative would not avoid all of the significant impacts associated with the Project and all of the identified mitigation would still be required.

SECTION 8. DRAFT STATEMENT OF OVERRIDING CONSIDERATIONS

The City Council hereby declares that, pursuant to the State CEQA Guidelines section 15093, the City Council has balanced the benefits of the Project against any unavoidable environmental impacts in determining whether to approve the Project. Pursuant to the State CEQA Guidelines, if the benefits of the proposed Project outweigh the proposed Project's unavoidable adverse environmental impacts, those impacts may be considered "acceptable."

Having reduced the adverse significant environmental effect of the Project to the extent feasible by adopting the Mitigation Measures contained in the EIR, the Mitigation Monitoring and Reporting Program ("MMRP"), and this Resolution, having considered the entire administrative record on the Project, and having weighed the benefits of the Project against its unavoidable adverse impact after mitigation, the City Council has determined that each of the following social, economic and environmental benefits of the Project separately and individually outweigh the Project's potential unavoidable adverse impacts and render those potential adverse environmental impacts acceptable based upon the following overriding considerations:

A. The Project provides needed housing to the City, particularly affordable housing.

B. The City, per the adopted 2015 Housing Element, has a jobs to housing ratio above the County average, indicating a need for additional housing. As of the most recent Housing Element Progress Report (April 2022), the City had not met its regional housing needs allocation for very-low or moderate income housing.

C. The Project would implement the City's General Plan. The Project site is identified as a housing site in the City's current General Plan, the current Housing Element, and the previous two iterations of the City's General Plan dating back to the 1975 General Plan.

D. The significant and unavoidable impact is related to VMT. Ultimately VMT per capita will be reduced by providing necessary housing in jurisdictions with a high number of jobs. As stated previously, the City of St. Helena currently has a jobs housing imbalance which the Project will help address.

E. The Project will pay development fees which will assist in needed infrastructure improvements in the City, including wastewater treatment and collection systems.

F. The Project would construct the extension of Starr Avenue and the partial extension of Adams Street consistent with the General Plan Circulation Element.

The City Council hereby declares that the foregoing benefits provided to the public through the approval and implementation of the Project outweigh the identified significant adverse environmental impact of the Project that cannot be mitigated. The City Council finds that each of the Project benefits separately and individually outweighs all of the unavoidable adverse environmental effects identified in the EIR and therefore finds those impacts to be acceptable.

Hunter Subdivision Project

Mitigation Monitoring and Reporting Program

SCH No. 2018032014

City of St. Helena

October 2022

Introduction

Public Resource Code (PRC) Section 21081.6(a)(1) requires a lead agency that approves a project where an environmental impact report (EIR) has been prepared that identified significant environmental effect to adopt a mitigation monitoring a reporting program (MMRP) for the mitigation measures or conditions of approval adopted to mitigate or avoid significant effects on the environment. The City of St. Helena is the lead agency for the EIR prepared for the Hunter Subdivision Project EIR (SCH # 2018032014) and is therefore responsible for the adoption and implementation of this MMRP. The EIR prepared for the Hunter Subdivision Project has identified mitigation measures to avoid or lessen Project impacts.

This MMRP has been prepared pursuant to PRC Section 21081.6 and provides the following:

- Verifies completion of the required mitigation measures;
- Provides a methodology to document implementation of the required mitigation;
- Provides a record of the monitoring program;
- Identifies monitoring responsibility;
- Identifies timing for completion of the mitigation measure.

This MMRP describes the procedures used to implement the mitigation measures and methods to monitor each action. If, during Project implementation, any of the mitigation measures cannot be successfully implemented, the City shall immediately inform any affected responsible agencies. The City, in coordination with the responsible agency, will then determine if modifications to the Project are required, or if an alternative mitigation is appropriate.

The following provides a monitoring table listing all the Project impacts and mitigation measures, method to verify compliance, timing of verification, entity responsible to verify compliance and date of verification completion.

EXHIBIT B: MITIGATION MONITORING AND REPORTING PROGRAM

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
3.1 Aesthetics/Visual Resources					
AES-1: To minimize spillover light while ensuring adequate nighttime security, the Project applicant shall prepare lighting design guidelines for the Project to be reviewed and approved by the City as part of the Design Review process. The lighting design guidelines shall include a lighting plan noting fixtures and lumens, and standards such as, lighting is to be shielded and downward focused to reduce glare and spillover light, up cast decorative lighting shall be limited to minimize effects on wildlife and to retain the rural ambience of the area, and the use of mirrored glass shall not be permitted. The lighting guidelines shall conform with Lighting Zone 2 of Title 24, Part 6, of the California Code of Regulations. The guidelines and lighting plan shall be approved as part of the Design Review application.	Project applicant shall prepare lighting and design guidelines for review by the City.	Prior to Design Review hearing	Community Development Dept.	No building permit will be issued	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
3.3 Biological Resources					
BIO-1: A qualified biologist shall conduct a habitat assessment for bats in trees adjacent to the Project site within 2 weeks prior to any Project construction (site clearing, grading). The habitat assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site and 50 feet around these areas. Potential roosting features found during the survey shall be mapped and described in a survey letter report. If roosting bats (individuals or colonies) are detected within the Project site, California Department of Fish and Wildlife shall be notified as soon as possible prior to any construction activity to confirm the bats can be avoided during construction. If a bat roosting or maternity colony cannot be completely avoided, a qualified biologist shall prepare a bat mitigation and monitoring plan for California Department of Fish and Wildlife review and approval, and that plan shall be implemented prior to	Project applicant shall retain a qualified biologist to conduct nesting/roosting bat habitat assessment; map and describe any potential roosting features in a survey letter report. If bats are detected the CDFW shall be contacted and bats avoided during construction, otherwise a bat mitigation and monitoring plan shall be prepared for CDFW review and approval.	Perform study two weeks prior to site clearing/grading. City reviews and approves study before issuing permits for any clearing or grading.	Community Development Dept. & Public Works Dept.	No grading permit will be issued	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
commencement of construction that could impact the roosting bats or maternity colony.					
BIO-2: If construction activities are scheduled to occur during the breeding season for birds (February 1 through August 31), the Project applicant or their contractor shall implement the following measures to avoid potential adverse effects to nesting raptors and other nesting birds: • Preconstruction surveys by a biologist of all potential nesting habitats within 500-feet of construction activities, where accessible, shall be conducted by a qualified biologist. Surveys shall occur no more than 14 days prior to the initiation of site disturbance. If construction is stopped for 14 days or more during the breeding season, a new preconstruction nesting bird survey must be conducted before work can be restarted to ensure no	Project applicant shall retain a qualified biologist to conduct preconstruction nesting bird surveys a minimum of 14 days if construction occurs between February 1 through August 31. A survey report shall be prepared documenting results of the survey. If nesting birds are present buffers shall be created around the trees.	Perform study two weeks prior to site clearing/grading. City reviews and approves study before issuing any permits for clearing, grading, or construction.	Community Development Dept. & Building Dept.	No grading permit will be issued	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
new nesting has occurred in the interim. • If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required, following submittal of a survey report letter to the City of St. Helena Planning Department. • If active nests are found during preconstruction surveys, a no-disturbance buffer shall be created around active nests during the breeding season or until it is determined by the biologist that all the young have fledged. The buffers shall be established by the biologist in conjunction with the California Department of Fish and Wildlife. Typical buffers may include 500 feet for raptors and 50 to 250 feet for other bird species based on the location of the nest, the nesting species present, and types					

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
of construction activities that may cause potential nest abandonment. The perimeter of the buffer zone shall be fenced or marked with staked flagging.					
BIO-3: Wetland permits (e.g., 404 Nationwide Permit, 401 Water Quality Certification, and 1602 Streambed Alteration Agreement, respectively) shall be obtained prior to any grading work. Prior to issuance of a grading permit, the Project applicant shall demonstrate authorization from the Army Corp of Engineers and any other regulatory agency to alter the wetland.	Obtain required wetland permit to fill the onsite wetland from the agency with jurisdiction.	Prior to site clearing or grading.	Community Development Dept. & Public Works Dept.	No grading permit will be issued	
3.5 Cultural and Tribal Cultural Resources					
CUL-1: The City shall require that an archaeological monitor is present during all ground-disturbing activities with the potential to impact previously identified cultural resources or to encounter unanticipated cultural deposits including tribal cultural resources. The determination for a Native American monitor to be present	The project applicant or their contractor shall retain an archeological monitor during all ground disturbing activities. The City shall determine, in consultation with the local tribe, if a Native American tribal monitor is also required to be onsite	During all ground disturbing activities.	Community Development Dept. & Building Dept.	Construction shall cease until compliance has been verified	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
shall be made by the City, in consultation with the appropriate Native American tribe prior to the initiation of ground disturbing activities. In addition, prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. Areas observed to have potential to contain yet-identified subsurface cultural material or deposits are located throughout the Project site, but primarily would be in the western portion of the site where the existing vineyard is located. It is anticipated resources would not be present at depths of more than 10 feet below the surface. Archaeological and Native American monitoring may be adjusted at the recommendation of the qualified archaeological principal investigator, meeting the Secretary of the Interior Professional Qualifications for Archaeology, and in consultation with the City, based	during ground disturbing work.				

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material. The archaeological and tribal monitors shall be provided a copy of technical reports prepared for the project and pertinent appendices to inform their monitoring efforts. The archaeological and tribal monitors shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until the qualified archaeological principal investigator, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the Tribe. Should it be determined by the					

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
Tribe and the archeologist, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. As approved by the City in consultation with the Tribe, this buffer may be adjusted by the Tribe and the archaeological principal investigator to a distance that maintains a protective perimeter around the unanticipated resource, while still allowing for construction to continue in the surrounding area.					
CUL-2: In the event any human remains are unearthed during site disturbing activities, Section 7050.5(b) of the California Health and Safety Code and Section 15064.5(e) of the CEQA Guidelines specifies protocols to follow in the event human remains are discovered. The Code mandates stopping work within 100 feet of the find and contacting the County Coroner to determine the origin of the remains. If the remains are determined to be Native American the Coroner shall contact the Native American	If human remains are unearthed the contractor shall stop all work within 100 feet and contact the County Coroner and the City.	During all ground disturbing activities.	Community Development Dept. and Public Works Dept.	Construction shall cease until compliance has been verified	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
Heritage Commission within 24 hours to request that the Commission determine the person or persons it believes to be descended from the deceased Native American. The most likely descendant shall be provided with the opportunity to make recommendations regarding the means of treating or disposing of the remains with appropriate dignity. Project-related ground disturbance in the vicinity of the find shall not resume until all statutory requirements have been met and evidence of completion has been submitted to the City, in consultation with the Tribe.					
3.6 Geology and Soils					
GEO-1: Prior to the issuance of any site-specific grading or building permits, the Project applicant shall have a design-level geotechnical report prepared and submitted to the City of St. Helena Building Department for review and approval in accordance with adopted City standards. The structural designs shall adhere to the currently adopted version of the California Building Code.	The project applicant shall prepare a design-level geotechnical report that meets the California Department of Conservation Special Publication 117A: *Guidelines for Evaluating and Mitigating Seismic Hazards in California.* The report shall be reviewed and approved by the City's building dept. The report	Prior to grading or building permits	Community Development Dept. & Building Dept.	No grading permit will be issued	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
The report shall identify specific site preparation methods, grading practices, foundation designs, and other recommendations appropriate for minimizing damage from weak soils, expansive soils, differential settlement, and seismic hazards, including liquefaction. Specifically, the following requirements for the geotechnical and soils report shall be met: • Analysis presented in the geotechnical report shall conduct a detailed evaluation of liquefaction in accordance with California Department of Conservation Special Publication 117A: *Guidelines for Evaluating and Mitigating Seismic Hazards in California*. • Additional subsurface soil borings shall be completed as necessary to represent the full range of site conditions, including the southern portion of the parcel mapped as alluvial fan.	shall contain specific site preparation methods, grading practices, foundation designs and recommendations.				

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
• Analysis presented in the geotechnical report shall include recommendations for building foundations and improvements, including sidewalks, parking lots, and subsurface utilities, that take into consideration the potential effects of settlement, collapse, and expansive or corrosive soils. This includes the recommendation to over excavate to an average depth of 4.5 feet (and up to 10 feet in the location of the former pond) due to anticipated settlement. • All design criteria and specifications set forth in the design-level geotechnical report shall be implemented as a condition of project approval. This report shall be completed as a condition of approval of the final tentative map.					

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
GEO-2: In the event that known or suspected paleontological resources (e.g., fossils) are unearthed during grading or trenching, the area of discovery shall be roped off by the construction contractor to include a 50-foot radius buffer and remain off-limits until cleared by a qualified paleontologist. The Project applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines, who shall be tasked with assessing the significance of the fossil find, including documenting the nature, location, and taxa of the find. The qualified paleontologist shall use his/her professional judgement as to the significance of the find, and whether the find should be preserved in a museum repository. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. Documentation of the fossil find, including appropriate salvage and recovery of fossil	If paleontological resources are unearthed during grading or trenching, the contractor shall stop all work within a 50-foot radius and contact a qualified paleontologist to assess the find and the City. If it is a fossil the paleontologist shall determine the appropriate steps.	During grading and trenching.	Community Development Dept., Dept. & Public Works Dept.	Construction shall cease until compliance has been verified	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
specimens and of transfer of to an appropriate repository (e.g., University of California Museum of Paleontology) shall be submitted to the City of St. Helena as evidence of compliance with this mitigation measure.					
3.9 Hazards and Hazardous Materials					
HAZ-1: As a condition of approval for construction and grading permits for the Project site, the Project applicant shall the ensure following subsurface soils testing and follow-up analysis shall be performed prior to obtaining a grading permit: • A soils testing work plan shall be developed in accordance with DTSC's Interim Guidance for Sampling Agricultural Properties (DTSC 2008) by an appropriately licensed individual (i.e., professional geologist, environmental engineer, or similar qualification) for the portions of the Project site historically used for	The project applicant shall retain a qualified individual to prepare a soils testing work plan in accordance with DTSC's Interim Guidance for Sampling Agricultural Properties to be submitted to the County and City for review and approval. The plan shall address the proper steps to follow if any contaminated soils are identified.	Prior to grading permits	Public Works Dept. and the Napa County Division of Environmental Health and/or other regulatory oversight agencies	No grading permit will be issued	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
agriculture. Special consideration shall be given to targeting site soils that are representative of historic agricultural use, and to avoid sampling recent fill material placed during levee construction. Prior to carrying out soils testing, the work plan shall be submitted to the Napa County Division of Environmental Health (as the Certified Unified Program Agency for all cities and areas of Napa County) and the City of St. Helena for review and approval. • The number of soil samples, sampling methods, compounds tested, background samples (if applicable), and laboratory analyses shall be completed in accordance with DTSC's Interim Guidance. Should analytical results exceed naturally occurring concentrations or applicable CHHSLs, the health risks of such a					

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
condition shall be evaluated in human health risk assessment as described in DTSC standards and guidance (e.g., preliminary endangerment assessment guidance manual). • The risk assessment shall describe measures that must be implemented to ensure potential health risks to construction workers, site residents, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than one in one million for carcinogens and a cumulative hazard index of 1 for non-carcinogens, or as required by the Napa County Division of Environmental Health acting as the Certified Unified Program Agency and/or DTSC oversight. In the event human health risk assessment shows elevated chemical concentrations pose a risk to human health or the					

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
environment, the risks shall be eliminated or substantially reduced by removal (e.g., excavation of soils and off-site disposal) or remediation of contaminated soils, and/or implementation of institutional controls and engineering controls (IC/EC). IC/EC may include use of a construction risk management plan, use of hardscape to cap problem areas, importation of clean soil in landscaped area to eliminate exposure pathways, and/or deed restrictions. If IC/EC are implemented, an Operations and Maintenance Program shall be prepared and implemented to ensure that the measures adopted are maintained throughout the life of the Project. The soil testing report, and if applicable, the human health risk assessment and Operations and Maintenance Program, shall be subject to review and					

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
approval by the City of St. Helena Department of Public Works, the Napa County Division of Environmental Health and/or other regulatory oversight agencies.					
3.11 Noise and Vibration					
NOI-1: The Project applicant or its contractors shall implement the following for onsite noise control and sound abatement means that, in aggregate, would yield sufficient construction noise reduction during the site preparation, grading/excavation, and building construction phases of the Project to ensure compliance with the FTA-based guidance standard of 90 dBA hourly Leq at or beyond the property lines of the nearest residences, as noted. *Administrative Controls* – At all times during site preparation and construction: • Comply with Chapter 8.24 of the Municipal Code with respect to allowable construction periods,	During construction activities the contractor shall demonstrate compliance with Comply with Chapter 8.24 of the Municipal Code. All onsite construction equipment shall be located as far away from any residences but if within 25 ft of an occupied residence shall be shielded to block noise.	During site clearing, grading and building	Police Dept.	Work shall cease until compliance has been verified	

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
• Minimize idling time of onsite equipment, and • Either locate onsite stationary construction equipment (such as generators or air compressors) as far from adjacent residential property boundaries as is feasible, or place this equipment inside an approved noise-attenuating casing (e.g., sound-attenuated air intakes and heat vents, exhaust mufflers, etc.), or place this equipment indoors. *Engineering Controls* – All mobile and stationary construction equipment employing an internal combustion engine shall be equipped with suitable exhaust and intake silencers which are in good working order; and *Install Sound Abatement* – During site preparation and construction which involves the operation of more than two pieces of heavy equipment (dozer, backhoe, front-end loader, crane, tractor, etc.) for at least one hour and when operating within 25 feet of the					

Hunter Subdivision Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Procedure	Timing of Monitoring	Monitoring Responsibility	Non-Compliance Sanction/Activity	Monitoring Compliance (Initial/Date)
exterior of a residence (either offsite or onsite), do the following: • Erect a temporary barrier (i.e., plywood sheet) or install sound blankets (or comparable temporary solid barriers) on the Project's construction fencing, or • Locate sound path intervening containers or trailers onsite to block direct line-of-sight between residences and the operating heavy equipment.					

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PLANNING COMMISSION RESOLUTION NO. XXXX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ST. HELENA RECOMMENDING THE CITY COUNCIL APPROVE A TENTATIVE SUBDIVISION MAP TO SUBDIVIDE AN EXISTING 16.9-ACRE PROPERTY INTO 51 LOTS FOR SINGLE FAMILY HOMES, ONE PARCEL FOR MULTI-FAMILY DEVELOPMENT, AND TWO LETTERED LOTS, LOCATED AT THE EASTERN TERMINUS OF ADAMS STREET IN THE CITY OF ST. HELENA, CALIFORNIA, APN 009-030-057

PROPERTY OWNER: Ben and Kelly Van Zutphen **APN:** 009-030-057

WHEREAS, the property owner requests adoption of a resolution recommending approval of a tentative subdivision map in order to accommodate the subdivision of a 16.9-acre parcel into 51 parcels for single family homes; one 3.13-acre parcel for multi-family homes and two parcels for landscaping and an onsite water well on a property located at the eastern terminus of Adams Street in the Medium Density Residential (MR) zoning district.; and

WHEREAS, a public notice was published in the Napa Valley Register and mailed to residents and occupants within 300 feet of the project site in compliance with state and local law; and

WHEREAS, the Planning Commission of the City of St. Helena, State of California, considered the project, staff report, and all testimony, written and spoken, at a duly noticed public hearing on November 1, 2022; and

WHEREAS, the findings made in this Resolution are based upon the information and evidence set forth in the Final EIR and upon other substantial evidence that has been presented at the hearings and in the record of the proceedings. The documents, staff reports, technical studies, appendices, plans, specifications, and other materials that constitute the record of the proceedings on which this Resolution is based are on file for public examination during normal business hours at the Planning Division located at City of St. Helena City Hall, 1480 Main St, St. Helena CA; and

WHEREAS, the Planning Commission has considered the findings identified in Municipal Code Section 16.16.080(A) to support the recommended approval of the Tentative Parcel Map, and determined based on the evidence in the record before the Planning Commission as follows:

1. That the proposed subdivision, together with the provisions for its design and improvement, is consistent with the general plan, any applicable specific plan, and other applicable provisions of the St. Helena Municipal Code; and

2. That the design of the proposed subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in the subdivision, as described in the State Subdivision Map Act and any guidelines promulgated by the City Council.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF ST. HELENA DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1: The Planning Commission finds:

(a) That it has reviewed the proposed tentative map and the evidence and testimony received in conjunction with the public hearing on the proposed tentative map, and that the proposed subdivision as conditioned by the proposed conditions of approval attached to this Resolution as Exhibit A, together with the provisions for its design and improvement, is consistent with the general plan, any applicable specific plan, and other applicable provisions of the St. Helena Municipal Code; and

(b) That design of the proposed subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in the subdivision, as described in the State Subdivision Map Act and any guidelines promulgated by the City Council.

SECTION 2: Based on the aforementioned findings, the Planning Commission does hereby recommend that the City Council approve the Hunter Tentative Subdivision Map, subject to the conditions of approval attached to this Resolution.

SECTION 3: The documents and materials that constitute the records of proceedings on which this Resolution has been based are located at the City of St. Helena City Hall at 1572 Railroad Ave. St. Helena, CA. The custodian for these records is the City of St. Helena City Clerk.

SECTION 4: The Secretary shall certify to the adoption of this resolution.

ADOPTED AND APPROVED the 1st day of November, 2022.

_____

PLANNING COMMISSION CHAIR

I hereby certify that the foregoing is a true copy of a resolution adopted by the Planning Commission of the City of St. Helena at a regular meeting thereof held on the 1st day of November, 2022 by the following vote of the Planning Commission:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____

PLANNING COMMISSION SECRETARY

EXHIBIT A: PROPOSED CONDITIONS OF APPROVAL

HUNTER SUBDIVISION CONDITIONS OF APPROVAL 10-20-22

Tentative Subdivision Map TM 2022-001
APN 009-030-057

These conditions shall apply to City approval of Tentative Subdivision Map TM 2022-001. However, the only conditions herein that constitute preconditions to the approval of the Final Map are those that explicitly state that they constitute such preconditions, and such conditions may be satisfied through substantial completion, as determined by the City Engineer, by execution of a Subdivision Improvement Agreement, in a form acceptable to the City Engineer, or a combination thereof. Either substantial completion or execution of a Subdivision Improvement Agreement or a combination of both, shall enable the City Engineer to make a determination of substantial compliance with these condition and the Tentative Subdivision Map TM 2022-001.

Planning Division: General Conditions

1. This specific approval is limited to the Tentative Subdivision Map TM 2010-40, and is not intended to serve as an approval of the overall project description that was submitted with the tentative map application.

2. This approval is based upon all conditions of approval set forth herein, including mitigation measures and specified plans and agreements included by reference, as well as all applicable City rules and regulations. Any deviations from the conditions must be reviewed and approved by the City for conformity with this approval. Deviations may require approved changes to these approvals and/or further environmental review. Deviations without the above described approval will constitute a violation of permit approval.

3. Except as specifically authorized in these conditions of approval, the grading, development, use, and maintenance of the property; the size, shape, arrangement, and location of the structures, parking areas and landscape areas; and the protection and preservation of resources shall be subject to Planning Commission approval and shall conform to the conditions of approval below. Notwithstanding the foregoing, the associated grading and construction of infrastructure for the project shall be permitted without Design Review approval if the design of such infrastructure has otherwise been approved by means of the Tentative Map or Final Map. All plans and agreements (such as landscape maintenance plans) required pursuant to these conditions of approval must be submitted for review and approval and shall be implemented as approved by the City.

4. The use and/or construction of any structures or improvements authorized by this approval shall not commence until all necessary planning and building permits pertaining to the use or construction in question are obtained. Before any grading or building permit will be issued by the City, the Owner/Applicant must obtain written clearance from all departments having

conditions; such clearance shall indicate that the Owner/Applicant has satisfied all pre-construction conditions.

5. The Owner/Applicant's acceptance of this permit and/or commencement of use, construction and/or operations under this approval shall be deemed acceptance of all conditions of this approval by the Owner/Applicant.

6. The Owner/Applicant shall ensure that potential contractors are aware of City requirements. The Owner/Applicant shall notify all contractors and subcontractors in writing of the site rules, restrictions, and Conditions of Approval and submit a copy of the notice to the Planning Department.

7. Pursuant to the Municipal Code, Section 16.16.100, the Tentative Map approval is valid for a two (2) year period ending _____, 2024, unless later extended by operation of state law. The Final Map shall be filed by this date or an extension of time shall be requested prior to the expiration date.

8. Pursuant to St Helena Municipal Code, any request for an extension of the Tentative Map must be justified in writing and received by the Planning Department at least twenty (20) days prior to expiration. The time at which such map expires may be extended by the City Council for one year, and on further application twenty (20) days before the expiration of the one year extension, the subdivider may request a second one-year extension, and on further application twenty (20) days before the expiration of the second one-year extension may request a third one-year extension. No extension shall be permitted beyond the third one-year extension.

9. Prior to recordation of the Final Map and subject to City approval as to form and content, the Owner/Applicant shall include all of the mitigation measures and conditions of approval associated with or required by this Project approval on a separate informational sheet(s) to be recorded with the Final Map. All applicable conditions and mitigation measures for the Project shall be printed on grading and/or building plans.

10. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases not later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.

11. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim,

action, or proceedings and the City cooperates fully in the defense of the action or proceedings.

12. This Tentative Parcel Map shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.

13. If the Tentative Map is proposed to be revised, including revisions to these conditions of approval, the revisions shall be approved pursuant to and in accordance with Section 16.16.130 of the St. Helena Municipal Code.

14. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official/Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.

15. All required fees, including planning fees, development impact fees, park impact fees, and building permit fees shall be paid prior to issuance of building permit unless such payment has been modified by adopted mitigation measures or conditions of approval. Fees shall be those in effect at the time of the issuance of the building permit.

16. This authorizes the creation of a tentative subdivision of a 16.92-acre parcel (APN 009-030-057) located at the north/east terminus of Adams Street into 52 lots. In addition, two lettered lots are created: Parcel A (0.06 acres) is an open space lot adjacent to an internal roadway; Parcel B (0.04 acres) will contain a private water well to be used for irrigation of landscaped areas.

17. All uses of the property shall be in compliance with the MR: Medium Density Residential zoning district regulations.

18. The applicant shall be responsible for compliance with all mitigations measures adopted as part of this project and listed in the Environmental Impact Report and Mitigation Monitoring and Reporting Program (MMRP) adopted as part of this project.

19. All conditions of approval shall be clearly identified and included on all plans submitted for future permit review and issuance.

20. Prior to applying for building permits, proposed future development on any of the newly created lots or parcels shall require the approval of a Design Review application and Use Permit application as applicable, subject to discretionary review by the Planning Commission.

21. The Applicant shall be responsible for all City plan check and inspection costs as described in the St. Helena Comprehensive Fee and Rate Schedule.

Planning Division: Final Map Conditions

22. The owners of the 51 single family residences shall be members of a homeowner's association dedicated to the maintenance of the project's common areas, the landscaping of the front yards of each of the single-family homes, the internal irrigation system (fed by the well on Parcel B), and the well on Parcel B.

23. Prior to recordation of the final map and concurrent with the Subdivision Improvement Plan, the applicant shall submit CC&R's (Codes, Covenants and Restrictions) to the City Attorney, Public Works Director and Community Development Director for review and approval. CC&R's shall be recorded at time of recordation of final map. CC&R's shall include all restrictions and maintenance regulations pertaining to, landscaping and common areas; shall include all restrictions and maintenance agreements pertaining to roads and access easements; and all restrictions and maintenance agreements pertaining to the irrigation well and internal irrigation water distribution system. The CC&Rs must be recorded prior to issuance of any building permit for any structure on the project site.

24. Pursuant to Section 16.20.090, upon approval of the final map by the City Council, the City Clerk shall execute the appropriate certificate on the certificate sheet and shall, subject to the provisions of Section 66464 of the state Subdivision Map Act, transmit the map, or have an authorized agent forward the map, to the county recorder prior to the issuance of a building permit.

25. Prior to issuance of a Certificate of Occupancy, all overhead utilities on the site shall be undergrounded.

Planning: Misc. Conditions

26. Prior to issuance of building permits, the applicant shall develop a building construction plan to be approved by the Planning Director and Building Official to insure that the homes exceed Title 24 Energy Efficiency Standards and receive a green rating under either the LEEDS, Green Points Checklist, or other acknowledged rating system for energy conservation and green building practices. The latest version of the City of St. Helena green building standards will apply at the time of building permit submittal.

27. Prior to approval of the Final Map, the applicant shall enter into an Affordable Housing Agreement with the City of St. Helena, which agreement shall be subject to review and approval by the St. Helena City Council. The Affordable Housing Agreement shall be recorded in the Official Records of Napa County, and shall ensure that the project complies with the requirements of Municipal Code section 17.146.050, Residential development project, inclusionary/in-lieu fee requirements. The Affordable Housing Agreement shall demonstrate how the project satisfies the minimum density requirement of the General Plan to construct a minimum of 87 dwelling units, including single family, multifamily, and accessory dwelling units.

Planning: Flooding Conditions

28. Prior to issuance of building permits, the occupant shall prepare a statement that has been approved by the Public Works Director for inclusion in the disclosure documents provided to purchasers of homes which describes the flood risk present at this location and notifies the buyer of the availability of low-cost Preferred Risk Policy flood insurance.

Planning: Landscape Conditions

29. City of St. Helena Community Development Department shall review the final landscape and fencing plan as part of a Design Review approval and prior to issuance of building permits for construction on the property to ensure compliance with Mitigation Measures. Landscaping shall be native, drought tolerant, compatible with oak trees and requiring minimal irrigation.

30. Landscape plans shall comply with the State of California Model Water Efficient Landscape Ordinance and Section 17.112.140 of the St Helena Municipal Code. Plans shall be designed and verified by a landscape professional and shall include drought tolerant landscaping and low water irrigation systems. Landscaping shall not block vision from exits or at street intersections.

Planning: Construction Activities Conditions

31. Mechanical equipment, including heating and air conditioning units and spa equipment, shall be located away from property lines and shall be shielded or enclosed to minimize noise levels. Noise generated shall not exceed 60 dBa, Ldn.

32. The applicant and/or construction manager shall notify all contractors and subcontractors that no trespassing is allowed on adjoining properties.

33. To reduce disturbance of residents in the project vicinity, construction activities which generate noise that can be heard at the property line of any parcel of real property within the City limits shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Saturday. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to 7:00 a.m. to 6:00 p.m. Exceptions to these time restrictions may be granted by the Public Works Director for one of the following reasons: (1) inclement weather affecting work, (2) emergency work, or (3)other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance. The City Engineer must be notified and give approval in advance of such work. No construction activities shall occur on Sundays or federal or local holidays that generate noise that can be heard at the property line of any parcel of real property within the City limits.

34. This property in the vicinity of an agricultural district. All future purchasers of homes or renters living in the project shall be notified of the expectation of legal, normal agricultural activities on the adjacent land, including day or night disbursement of chemicals, and creation of dust, noise, or fumes, and of the City's Right to Farm ordinance.

Public Works: General Conditions

35. Prior to recordation, the Final Map shall be designed to the satisfaction of the Public Works Director to accommodate the following facilities in the right of way of both Starr Avenue and Adams Street:

    - Curb and Gutter in accordance with City Standard #310 for a 24" gutter.
    - Sidewalks on both sides of the street in accordance with City Standard #315
    - Parking lane on both sides of the street in accordance with City Standard #301 for a "Collector" street.
    - Class II on-street bike lane on both sides of the street in accordance with Caltrans' Highway Design Manual Index 1003.2 but not less than 5 feet wide.
    - Two vehicle travel lanes in accordance with City Standard #301 for a "Collector" street.
    - Striping to delineate parking, bike, and travel lanes.

36. All public improvements utility connections shall be designed in accordance with the City of St. Helena's Construction Standards (SHMC 16.32.230).

37. The City has adopted the latest edition of the Bay Area Stormwater Management Agencies Association (BASMAA) Post-Construction Manual. Applicant is responsible for conformance construction plans in accordance with the BASMAA Manual, SHMC Section 13.32 et. seq., and the State Water Resources Control Board Phase II Municipal Separate Storm Water System (MS4) General Permit (Order 2013-0001 DWQ). Approval of project by Planning Commission does not constitute compliance with storm water regulations nor a right to develop per approved plans unless this condition of approval is fully satisfied.

38. Grading plans, public improvement plans and connections to public utilities shall be prepared by a California Licensed Civil Engineer.

39. An Encroachment Permit is required prior to starting work within City right of way.

40. All public facilities damaged by construction activities shall be the responsibility of the Applicant and shall be repaired to the satisfaction of the City at the Applicant's expense.

41. During water shortage emergencies, all construction water used for the project shall be obtained from a source other than a City of St. Helena potable water sources (SHMC 13.04.221).

42. Unless exempted, any ADU or JADU constructed with a new single-family home shall have a separate utility connection directly between the ADU or JADU and the utility and payment of the normal connection fee and capacity charge for a new dwelling are required SHMC 17.116.030(G)(2).

43. Developer shall design and construct all improvements and facilities shown on any approved tentative map, site plan, or other documents submitted for permit approval, in accordance with

the St. Helena Municipal Code (SHMC), and the City of St. Helena Design and Construction Standards. Approval of a tentative map depicting improvements that do not conform to the SHMC or City standards does not constitute approval of an exception to the SHMC or City standards unless explicitly stated herein or in another City resolution.

44. The developer shall be responsible for all City plan check, map check and inspection costs. The developer shall deposit funds with the City upon the initiation of plan check services. The amount of the initial deposit shall be determined by the City Engineer. Additional funds may be required based upon actual plan check and inspection costs.

45. If any of the improvements which the applicant is required to construct or install is to be constructed or installed upon land in which the applicant does not have title or interest sufficient for such purposes, the applicant shall do all of the following at least 60 days prior to the filing of the final or parcel map for approval pursuant to Government Code Section 66457:

    a) Notify the City of St. Helena (hereafter "City") in writing that the applicant wishes the City to acquire an interest in the land which is sufficient for such purposes as provided in Government Code Section 66462.5;

    b) Supply the City with (i) a legal description of the interest to be acquired, (ii) a map or diagram of the interest to be acquired sufficient to satisfy the requirements of subdivision (e) of Section 1250.310 of the Code of Civil Procedure, (iii) a current appraisal report prepared by an appraiser approved by the City which expresses an opinion as to the current fair market value of the interest to be acquired, and (iv) a current Litigation Guarantee Report;

    c) Enter into an agreement with the City, guaranteed by such cash deposits or other security as the City may require, pursuant to which the applicant will pay all of the City's cost (including, without limitation, attorney's fees and overhead expenses) of acquiring such an interest in the land.

46. Prior to the issuance of a Certificate of Occupancy, all proposed utilities, both on-site and along project frontages, shall be placed underground. This does not include surface mounted transformers, pedestal mounted terminal boxes and meter cabinets.

47. Except for the existing well on Lot 19 of the Tentative Map that will be providing irrigation water to this development, all existing wells, septic tanks and/or underground fuel storage tanks shall be abandoned under permit and inspection of Napa County Department of Environmental Health. If applicant determines that there are none, prior to the issuance of a grading permit, the project engineer shall provide a letter describing the scope of the search done to make this determination and demonstrating to the reasonable satisfaction of the City Engineer that there are no other existing wells, septic tanks and/or underground fuel storage tanks within the boundaries of the Tentative Map.

Public Works: Fees

48. Public Works engineering and inspection fees for Improvement Plan and Final Map review shall be due and payable at the time of making the first submittal in connection with the Improvement Plans or the Final Map, as applicable.

49. All Public Works Development Impact fees shall be due and payable at the time of issuance of building permit(s) for the improvements to which they are applicable, unless otherwise authorized by the City.

Public Works: Improvement Plan and Construction Conditions

50. Improvement plans shall be prepared and submitted by a California Registered Civil Engineer for the construction of all necessary and required on-site and off-site improvements including grading, water, sanitary sewer, storm drain facilities, roadway improvements, curbs, gutters, sidewalks, parkway strips and streetlights. All design and construction shall conform to the City of St. Helena Design and Construction Standards, as applicable.

51. Per Mitigation Measure GEO-1, a detailed Soils Investigation/Geotechnical Report (the "Soils Report") shall be prepared and submitted for review with the submittal of the improvement plans. The report shall address, at a minimum, potential for liquefaction, expansive soils, seismic risk, recommendations for roadway structural sections, foundation, and other items as mentioned in the Mitigation Measure. The improvement plans shall incorporate all design and construction criteria recommended in the Geotechnical Report and acknowledgement of inclusion of any recommendations in the soils report applicable to improvements within this development shall be included on a signature line for the Geotechnical Engineer on the cover sheet of the improvement plans. The signature line should include a statement that the Geotechnical Engineer has reviewed the plans and that the plans have incorporated recommendations as outlined in the Soils Report.

52. All private water mains, sewer mains and storm drains shall be clearly labeled "Private" on the improvement plans.

53. Improvements plans shall include a storm water pollution prevention plan. Erosion control measures shall be included within the improvement plans and the projects WDID number shall be included on the cover sheet of the improvement plans.

54. The improvement plans shall include the following note per the *Engineering Controls* portion of Mitigation Measure NOI-1: "All mobile and stationary construction equipment employing an internal combustion engine shall be equipped with suitable exhaust and intake silencers which are in good working order."

55. Roadway Improvements:

    a. The structural section of all road improvements shall be designed based upon a geotechnical investigation that provides the basement soils R-value and expansion pressure test results. A copy of the geotechnical report shall also be submitted with the first set of improvement plan check-prints.

    b. Where new roadway improvements abut existing paving and sidewalk, curb and gutter, the existing pavement and concrete curb and gutter section shall be saw-cut and reconstructed to provide a smooth conforms conform. The limits of such reconstruction shall be as determined by the City Engineer.

    c. Pavement markings and signage shall be provided on all streets as necessary and as required by the City Engineer. Signage restricting parking and red painted curbing shall be installed where appropriate. Speed limit signs and other regulatory and informational signs shall be installed at locations determined by the City Engineer.

    d. Street lighting shall be designed to provide to meet safety requirements and minimize glare. Street light standard and luminaries of the design, spacing, and locations shall be approved by the City Engineer. All lighting must have shields.

    e. Ramps for disabled persons meeting the most recent standards shall be provided at all intersections and at the limits of the improvements where they do not adjoin existing sidewalk improvements. Sidewalk warps shall be provided as necessary to allow a clear four-foot-wide walkway at all locations, including areas where mailboxes, streetlights, and fire hydrants obstruct sidewalks.

56. In accordance with mitigation measure BIO-1 of the approved environmental document, a qualified biologist shall conduct a habitat assessment for bats in trees adjacent to the Project site within 2 weeks prior to any Project construction (site clearing, grading). The habitat assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site and 50 feet around these areas. Potential roosting features found during the survey shall be mapped and described in a survey letter report. If roosting bats (individuals or colonies) are detected within the Project site, California Department of Fish and Wildlife shall be notified as soon as possible prior to any construction activity to confirm the bats can be avoided during construction. If a bat roosting or maternity colony cannot be completely avoided, a qualified biologist shall prepare a bat mitigation and monitoring plan for California Department of Fish and Wildlife review and approval, and that plan shall be implemented prior to commencement of construction that could impact the roosting bats or maternity colony. A written report of the findings shall be provided to the City prior to grading.

57. In accordance with mitigation measure BIO-2 of the approved environmental document, if construction activities are scheduled to occur during the breeding season for birds (February

1 through August 31), prior to commencement of construction the Project applicant or their contractor shall implement the following measures to avoid potential adverse effects to nesting raptors and other nesting birds:

- Preconstruction surveys by a biologist of all potential nesting habitats within 500 feet of construction activities, where accessible, shall be conducted by a qualified biologist. Surveys shall occur no more than 14 days prior to the initiation of site disturbance. If construction is stopped for 14 days or more during the breeding season, a new preconstruction nesting bird survey must be conducted before work can be restarted to ensure no new nesting has occurred in the interim.

- If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required, following submittal of a survey report letter to the City of St. Helena Planning Department.

- If active nests are found during preconstruction surveys, a no-disturbance buffer shall be created around active nests during the breeding season or until it is determined by the biologist that all the young have fledged. The buffers shall be established by the biologist in conjunction with the California Department of Fish and Wildlife. Typical buffers may include 500 feet for raptors and 50 to 250 feet for other bird species based on the location of the nest, the nesting species present, and types of construction activities that may cause potential nest abandonment. The perimeter of the buffer zone shall be fenced or marked with staked flagging.

58. In accordance with mitigation measure BIO-3 of the approved environmental document, wetland permits (e.g., 404 Nationwide Permit, 401 Water Quality Certification, and 1602 Streambed Alteration Agreement, respectively) shall be obtained prior to any grading work. Prior to issuance of a grading permit, the Project applicant shall demonstrate authorization from the Army Corp of Engineers and any other regulatory agency to alter the wetland.

59. Prior to the commencement of grading, the developer shall provide evidence that an archaeological monitor has been retained to be present on the site during all ground-disturbing activities per mitigation measure CUL-1.

60. Per mitigation measure CUL-2 of the approved environmental document, if human remains are unearthed during grading operations, work must stop within 100 feet of the find and the county Coroner shall be contacted immediately.

61. Per mitigation measure GEO-2 of the approved environmental document, if known or suspected paleontological resources are unearthed during grading or trenching operations, the area of discovery shall be roped off by the contractor to include a 50-foot radius buffer and remain off-limits until cleared by a qualified paleontologist.

62. Per mitigation measure HAZ-1 of the approved environmental document, the Project applicant shall ensure the following subsurface soils testing and follow-up analysis be performed prior to obtaining a grading permit:

    - A soils testing work plan shall be developed in accordance with DTSC's Interim Guidance for Sampling Agricultural Properties (DTSC 2008) by an appropriately licensed individual (i.e., professional geologist, environmental engineer, or similar qualification) for the portions of the Project site historically used for agriculture. Special consideration shall be given to targeting site soils that are representative of historic agricultural use, and to avoid sampling recent fill material placed during levee construction. Prior to carrying out soils testing, the work plan shall be submitted to the Napa County Division of Environmental Health (as the Certified Unified Program Agency for all cities and areas of Napa County) and the City of St. Helena for review and approval.

    - The number of soil samples, sampling methods, compounds tested, background samples (if applicable), and laboratory analyses shall be completed in accordance with DTSC's Interim Guidance. Should analytical results exceed naturally occurring concentrations or applicable CHHSLs, the health risks of such a condition shall be evaluated in human health risk assessment as described in DTSC standards and guidance (e.g., preliminary endangerment assessment guidance manual). • The risk assessment shall describe measures that must be implemented to ensure potential health risks to construction workers, site residents, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than one in one million for carcinogens and a cumulative hazard index of 1 for non-carcinogens, or as required by the Napa County Division of Environmental Health acting as the Certified Unified Program Agency and/or DTSC oversight. In the event human health risk assessment shows elevated chemical concentrations pose a risk to human health or the environment, the risks shall be eliminated or substantially reduced by removal (e.g., excavation of soils and off-site disposal) or remediation of contaminated soils, and/or implementation of institutional controls and engineering controls (IC/EC). IC/EC may include use of a construction risk management plan, use of hardscape to cap problem areas, importation of clean soil in landscaped area to eliminate exposure pathways, and/or deed restrictions. If IC/EC are implemented, an Operations and Maintenance Program shall be prepared and implemented to ensure that the measures adopted are maintained throughout the life of the Project.

63. Per mitigation measure NOI-1 of the approved environmental document, the contractor shall implement the following for onsite noise control and sound abatement means that, in aggregate, would yield sufficient construction noise reduction during the site preparation, grading/excavation, and building construction phases of the Project to ensure compliance with the FTA-based guidance standard of 90 dBA hourly Leq at or beyond the property lines of the nearest residences, as noted.

    Administrative Controls – At all times during site preparation and construction:

- Comply with Chapter 8.24 of the Municipal Code with respect to allowable construction periods,

- Minimize idling time of onsite equipment, and

- Either locate onsite stationary construction equipment (such as generators or air compressors) as far from adjacent residential property boundaries as is feasible or place this equipment inside an approved noise-attenuating casing (e.g., sound-attenuated air intakes and heat vents, exhaust mufflers, etc.), or place this equipment indoors.

Engineering Controls – All mobile and stationary construction equipment employing an internal combustion engine shall be equipped with suitable exhaust and intake silencers which are in good working order; and

Install Sound Abatement – During site preparation and construction which involves the operation of more than two pieces of heavy equipment (dozer, backhoe, front-end loader, crane, tractor, etc.) for at least one hour and when operating within 25 feet of the exterior of a residence (either offsite or onsite), do the following:

- Erect a temporary barrier (i.e., plywood sheet) or install sound blankets (or comparable temporary solid barriers) on the Project's construction fencing, or

- Locate sound path intervening containers or trailers onsite to block direct line-of-sight between residences and the operating heavy equipment.

Public Works: Improvement Plan and Construction Conditions

64. Starr Avenue: Prior to the issuance of a Certificate of Occupancy, Starr Avenue shall join the existing Starr Avenue at Hunt Avenue and shall be improved to include the facilities listed in condition of approval #58. The structural section of the street shall be per recommendations contained in the Soils Report.

65. Adams Street: Prior to the issuance of a Certificate of Occupancy, Adams Street shall join the existing section of Adams Street (currently a dead end) and be extended into the subdivision. The street shall be improved per condition of approval #58. At the northerly terminus of Adams Street, a conform shall be constructed with Class 2 aggregate base to connect to the existing walking path/access road/levee. A gate shall be included at the terminus of the road and connection to the walking path/access road that has appropriate signage indicating it is not a through road for vehicles. The gate shall be constructed per direction from the Fire Chief and shall include a Knox box. The structural section of the street shall be per recommendations contained in the Soils Report.

66. Street A: Prior to the issuance of a Certificate of Occupancy, Street A shall be improved to include two 12 ft. travel lanes, two 8 ft. parking lanes, curbs, gutters, a 6 ft. planter strips and

4 ft. sidewalk on the south side of the road and a 10-foot distance from the face of curb to the right-of-way line on the west side of the road. The total right-of-way width shall be 56 feet. The area between the curb and the right-of-way line on the west side of the street shall be graded such that it can be passable by pedestrians (cross slopes should not exceed 5%). The structural section of the street shall be per recommendations contained in the Soils Report.

67. Streets B and C: Prior to the issuance of a Certificate of Occupancy, Streets B and C shall be improved to include two 10 ft. travel lanes, two 8 ft. parking lanes, curbs, gutters, 6 ft. planter strips and 4 ft. sidewalks within an overall 56 ft. right-of-way. The cul-de-sac associated with Street C shall be constructed per City Standard 304. The knuckle at the intersection of Streets B and C shall be constructed per City Standard 305. The structural section of the street shall be per recommendations contained in the Soils Report.

68. EVA: From Street A to levee: Prior to the issuance of a Certificate of Occupancy, the emergency vehicle access road (EVA) shall be improved to provide an all-weather access road (paved) from Street A up to the existing levee road to the north. The width of the EVA shall be a minimum of 21 feet from face of curb to face of curb within an overall 25 ft. wide dedicated EVA. The EVA shall accommodate emergency vehicles (must provide for turning radii to accommodate fire vehicles as per the Fire Department requirements.) Turning templates shall be provided with the improvement plans during the plan check process to ensure the EVA can accommodate Fire Department apparatus.

69. Access from Lot 52 to Starr Avenue shall be at a minimum, the same width and configuration as the EVA. If pedestrians are to use this access point, pedestrian facilities (min. 4-foot sidewalk) shall be provided adjacent to one side of the roadway. If a sidewalk is included, overall width of this parcel shall be at least 31 feet. Ownership of this parcel shall be the same as Lot 52.

70. Adjacent to Lot 51 there is a portion of existing right-of-way that needs to be vacated by the City prior to the recordation of the final map. The applicant shall provide all descriptions and plats to the City for vacation of this right-of-way. The vacation of the right-of-way by the City of St. Helena shall either be done prior to or concurrently with the recordation of the final map.

71. Per Mitigation Measure AES-1, all streetlights shall include shields and downward focused to reduce glare and spillover light and to minimize effects on wildlife and to retain the rural ambience of the development.

Public Works Water and Sanitary Sewer Improvements Conditions

72. As detailed in the Final EIR for the project, the Developer is required to off-set the Project's water demand of 37.04 AFY. The Project's landscape water demand is estimated at 17.16 acre-feet per year, which is within the capacity of the existing on-site well. Due to the new potable water demand on the City system in the amount of 19.8 AFY, the Developer shall

implement an alternative innovative method of mitigating water use as allowed under Section 13.12.030(B) of the SHMC and/or Appendix J of the EIR. The required improvements to offset water demand are as follows: Identify and implement offsite improvements that reduce water loss from the public water distribution system and/or identify and implement offsite improvements that result in a net increase in potable water availability equivalent to 19.8 AFY, or a combination of these. No building permit may be issued until the City has confirmed that the Developer has completed the approved measures and such measures have been accepted by the City, or Developer has entered into a public improvement agreement with the City to ensure the completion of such improvements and provided security in one of the forms described in Government Code section 66499 in an amount equal to the estimated cost of construction of the proposed offsite improvements as determined, or reviewed and approved, by the City Engineer. Any public improvements shall be constructed to St. Helena Public Works Construction Standards whenever applicable.

73. Any modifications to the existing well other than the installation or maintenance of pumping and storage equipment and connection to the onsite irrigation water distribution system, shall require a permit per section 13.16.060 of the St Helena Municipal Code.

74. The Final Map shall include easements to provide for the installation of the private onsite water system connected to onsite well.

75. All homes and the proposed multi-family parcel shall be served by the onsite well for landscaping and other outdoor water use. Only interior fixtures may be served by City of St. Helena domestic water.

76. All parcels must be connected to the internal irrigation well for outside uses, including landscape irrigation and exterior hose bibs.

77. The Applicant shall make written application to the City of St. Helena in conformance with Chapter 13.04 of the St. Helena Municipal Code for Water Service to the new parcels.

78. The applicant/owner shall be required to install water mains and service lines to serve the project parcels with City water. All water mains and lines within the public right of way shall be constructed in conformance with City standards.

79. The applicant/ owner shall make written application to the City of St. Helena for annexation to the Sewer District and for Sewer Service to the new parcels in conformance with Chapter 13.20.070 of the St. Helena Municipal Code.

80. All public water and sewer mains must be located in public right-of-way wherever possible. Where public water and sewer mains must be located on private property, all necessary easement dedications must be made part of the final map or by separate document (if outside of the boundaries of the final map) prior to final acceptance of the improvements by the City.

81. Sewer grades must be designed such that ultimate finished floors are a minimum of 12" above upstream manhole or clean-out rim elevations. Inadequate elevation differentials or grade on private laterals, as determined by the City, must be mitigated by either raising finished floor elevation(s) or installing privately owned and operated sewer lift station(s) with grinder/ejector pump(s) on site.

82. All water improvements shall conform to the City standards.

83. The existing 10 ft. public waterline easement shall be abandoned by separate document once the relocated water line has been built and is operational.

84. Prior to the first Certificate of Occupancy, the existing 12-inch waterline running through the development shall be relocated to Starr Avenue by the applicant/developer. At the westerly end of Starr Avenue, the line shall be reconnected to the existing 12-inch waterline outside north of Lot 46.

85. The proposed well and appurtenances (pump, etc.) for this development shall be owned and operated by the Homeowner's Association for this development. The well shall supply irrigation water for all landscaping of common areas and on all lots within the subdivision to limit use of domestic water produced by the City. Signage shall be provided on each lot warning of the use of well water and that the well water shall not be used for domestic purposes. Piping for all irrigation water from the well shall be purple pipe (same as used for recycled water). Also, disclosure statements (either through disclosures as required by the Department of Real Estate or on the final map) shall be provided to all property owners notifying them about use of well water and statements warning that well water should not be used for domestic purposes.

86. The sewer easement on lot 21 shall be a minimum of 15 feet wide and shall be located entirely within Lot 21. Statements shall be included on the final map precluding any permanent structures from being constructed within this easement. The sewer line shall be connected to the existing sewer main in Paseo Grand Drive.

Public Works Drainage Improvements Conditions

87. All project related flooding impacts shall be mitigated by the project developer. Drainage improvements shall be designed and funded by the developer in accordance with the Design Criteria utilizing the rationale method and any applicable adopted City drainage plans.

88. Prior to building permit issuance, the applicant shall submit for review and approval, drainage plans and hydraulic calculations prepared by a Registered Civil Engineer. The drainage plans and calculations shall indicate the following conditions before and after development:

    - Quantities of water, water flow rates, major water courses, drainage areas and patterns, diversions, collection systems, flood hazard areas, sumps and drainage courses.

89. Post-development off-site flows shall not exceed pre-development flows.

90. Prior to building permit issuance, the applicant shall provide to the City an analysis of the capacity and condition of existing drainage facilities downstream of the development (including any detention/retention ponds), including recommendations for off-site drainage improvements, which shall be constructed prior to the issuance of the first certificate of occupancy. Site grading and drainage improvements shall be shown on the improvement plans.

91. The 100-year overflow and pipeline easement on Lot 25 shall be dedicated on the final map and language shall be included on the final map prohibiting any permanent structures (including garages, sheds, swimming pools, etc.) from being constructed within the easement, as well as provisions (including requirement regarding grading) that ensure that Lot 25 remain in a condition such that it allows relief for the 100-year storm overflows.

92. Prior to issuance of a grading permit, easements from all of the existing adjacent property owners backing up to Lots 5-20 shall be obtained to allow for the construction and long-term maintenance of the proposed ditch at the base of the retaining wall as depicted in Section 2 on page TM4 of the Tentative Map. This ditch shall be privately owned and maintained.

Public Works Final Map Conditions

93. A final map, as defined in the State Subdivision Map Act, shall be prepared by a licensed surveyor or civil engineer, showing all parcels, rights-of-way, and easement(s) shall be filed with the City Engineers Office. The final map shall be substantial conformance with the approved Tentative Map and all applicable conditions of approval. The final map is not valid until it has been approved and recorded.

94. Prior to building permit issuance, the developer shall secure all necessary rights-of-way and easements for both onsite and offsite improvements. Rights-of-way and easements shall be dedicated on the map or provided by separate instrument. The developer shall prepare all necessary legal descriptions and deeds. Offers of dedication shall be either via easement or fee title).

95. The applicant shall transmit by certified mail a copy of the conditionally approved Tentative Map together with a copy of Section 66436 of the State Subdivision Map Act to each public entity or public utility that is an easement holder of record. Written compliance shall be submitted to the City of St. Helena

96. The final map shall not be approved prior to approval of the Subdivision Improvement Plans.

97. Prior to approval of the final map, the developer shall either complete required improvements in accordance with the approved improvement plans or enter into a Subdivision Improvement Agreement with the City. A certificate of occupancy shall not be

issued for any structure until required improvements are completed to the satisfaction of the City Engineer.

98. Abandonment of existing 10-foot public water easement crossing the property shall be included on the final map or by separate document.

99. The unnumbered lot between Lots 3 and 4 as shown on the Tentative Map shall be included as part of Lot 52 and shall not be a separate lot.

Public Works Construction Conditions

100. No grading or other construction shall be performed until the improvement plans have been approved and signed by the City Engineer. Encroachment Permits and Building Permits will not be issued prior to the approval of the improvement plans. An Encroachment Permit is required for any work within the City's rights of way.

101. The developer shall keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period, as is found necessary by the City Engineer.

102. Prior to the issuance of a grading permit, the developer shall provide evidence that a Notice of Intent has been submitted and received by the Regional Water Quality Control Board for a General Construction Activity Storm Water Permit. A copy of the project Storm Water Pollution Protection Plan shall be submitted to the City.

103. If any hazardous waste is encountered during the construction of this project, all work shall be immediately stopped and the Napa County Environmental Health Department, the Fire Department, the Police Department, and the City Inspector shall be notified immediately. Work shall not proceed until clearance has been issued by all of these agencies.

104. Prior to final preparation of the subgrade and placement of base materials, all underground utilities shall be installed and service connections stubbed out behind the sidewalk. Public utilities, Cable TV, sanitary sewers, and water lines shall be installed in a manner which will not disturb the street pavement, curb, gutter and sidewalk, when future service connections or extensions are made.

105. Where soil or geologic conditions encountered in grading operations are different from that anticipated in the soil and/or geologic investigation report, or where such conditions warrant changes to the recommendations contained in the original soil investigation, a revised soil or geologic report shall be submitted for approval by the City Engineer. It shall be accompanied by an engineering and geological opinion as to the safety of the site from hazards of land slippage, erosion, settlement, and seismic activity. Additionally, if field conditions warrant installation of any subdrains, the location, size and construction details must be provided to the City for review and approval prior to construction.

106. Prior to placing the final lift of asphalt, all public sanitary sewer lines shall be video inspected at the expense of the contractor/developer. All video tapes shall be submitted to the City. If any inadequacies are found, they shall be repaired prior to the placement of the final lift of asphalt.

107. All streets, curbs, gutters, sidewalks or other public facilities damaged in the course of construction associated with this development shall be the responsibility of the Developer and shall be repaired to the satisfaction of the City at the Developer's expense.

108. The applicant shall submit a proposed haul route for all trucking associated with this project to the City Engineer for review and approval prior to issuance of a grading permit.

109. Dust control must be maintained to the City's satisfaction.

110. A certificate of occupancy shall not be issued for any structure until required improvements are completed to the satisfaction of the City Engineer.

Public Works Subdivision Final and/or Release of Securities Conditions:

111. All public improvements shown on the Improvement Plans shall be completed and accepted by the City prior to release of any security posted.

112. All punch-list work shall be completed, and any outstanding inspection fees or other charges shall be paid prior to issuance of any certificate of occupancy or prior to acceptance of the improvements, at the discretion of the City.

113. Video inspections shall be made of all storm drain and sewer lines installed by developer as set forth in the approved improvement plans to ensure that they are clean of dirt, rocks, debris or other material. Contractor/developer shall be responsible for cleaning and flushing all storm drain lines prior to acceptance by the City. If flushing of the storm drain system is required, the contractor/developer shall put sufficient plugs/filters in place to ensure that any debris, mud or other material is not washed beyond the piping system in the subdivision nor into any natural water course. A copy of the DVD of all storm drain lines shall be delivered and reviewed by the City prior to acceptance. This condition shall be satisfied prior to issuance of any certificate of occupancy or prior to acceptance of the improvements, at the discretion of the City.

114. Developer shall provide sufficient security guaranteeing the public improvements for a period of one year.

115. A complete set of As-Built or Record improvement plans showing all substantial changes from the original plans shall be certified by the Civil Engineer of record and submitted to the City Engineer prior to acceptance of the public improvements.

116. Prior to acceptance of the public improvements, the developer shall provide a written statement signed by his or her engineer certifying that they observed the work during

construction and that site grading and all private site improvements have been completed in accordance with the improvement plans approved by the City Engineer.

117. Prior to acceptance of the public improvements, the developer shall provide a written statement signed by his or her geotechnical engineer certifying that they observed the work and reviewed testing results, and that all of work was performed in accordance with the recommendations included in the Soils Report or other recommendations necessitated by field conditions.

Fire Department Conditions

118. Prior to the issuance of a Certificate of Occupancy, the developer is responsible for fire hydrants to be included and installed within the development (number, location and spacing) to the satisfaction of the Fire Department. Locations of the fire hydrants shall be approved by the Fire Department prior to approval of the final map.

119. Plans submitted for building permit shall exhibit compliance with the current St. Helena Fire Code, as adopted and codified in St. Helena Municipal Code Chapter 15.36.

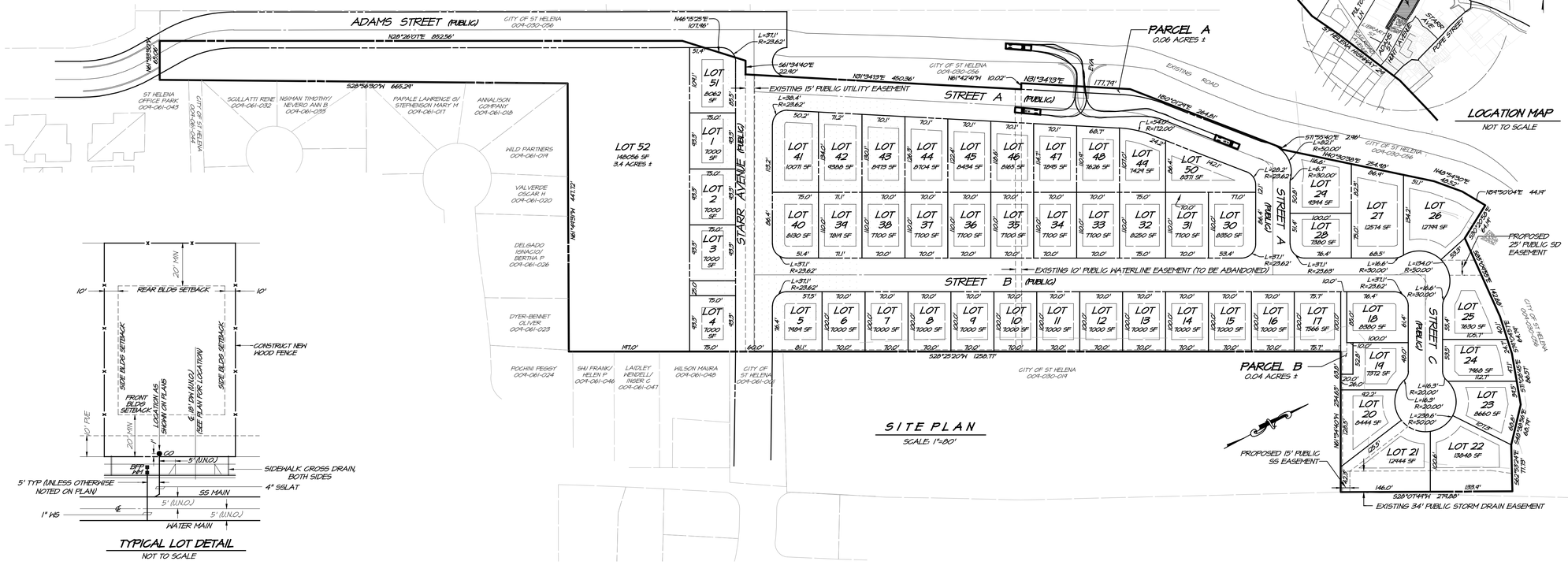
120. Prior to issuance of future building permits, all construction plans for homes and other structures shall include fire sprinklers as required by the City of St. Helena Fire Department.

121. One hour minimum fire-resistant construction on all exterior walls within 10’ of property boundary is required. Fire resistant construction of interior walls shall be determined by type of occupancy.

122. Any gates installed to control vehicular access to a property are required to be setback 30-feet from the property line and/or edge of pavement, whichever is greater. No vehicle gates may be installed without Fire Department and Public Works Department review and explicit approval.

123. Access to the levee road is restricted for public use and only granted to emergency vehicles and emergency egress for Vineyard Valley Mobile Home Park residents. Signage prohibiting its use by the public is recommended. Public access will be granted at the discretion of the Authority Having Jurisdiction during emergencies/evacuations.

TENTATIVE MAP
HUNTER SUBDIVISION
ST HELENA CALIFORNIA



SITE PLAN
SCALE: 1"=80'

TYPICAL LOT DETAIL
NOT TO SCALE

LOCATION MAP
NOT TO SCALE

SYMBOL LEGEND

EXISTING		PROPOSED
EDGE OF PAVEMENT		EDGE OF PAVEMENT
STORM DRAIN LINE		STORM DRAIN LINE
SANITARY SEWER LINE		SANITARY SEWER LINE
WATER LINE		WATER SERVICE LINE
SANITARY SEWER MANHOLE		SANITARY SEWER MANHOLE
STORM DRAIN MANHOLE		STD STORM DRAIN MANHOLE
BANK/SLOPE		2:1 SLOPE, UNLESS OTHERWISE SHOWN
CURB AND GUTTER		STD CURB AND GUTTER
CATCH BASIN		STD CATCH BASIN
SIDEWALK		STD SIDEWALK
FIRE HYDRANT		STD FIRE HYDRANT
WATER VALVE		STD WATER VALVE
STREET LIGHT		STREET LIGHT
CLEANOUT		DROP INLET
WATER METER AND BACKFLOW PREVENTION DEVICE		RIGHT OF WAY / PROPERTY LINE
TREE TO REMAIN		RETAINING WALL
FENCE		100-YEAR OVERLAND RELEASE PATH
JOINT POLE W/ GUY		EXISTING RUNOFF DIRECTION
DRIVEWAY		STANDARD DRIVEWAY
CONTOUR LINE		REMOVE EXISTING TREE
SPOT ELEVATION		
OVERHEAD ELECTRIC		

ABBREVIATIONS

AB	AGGREGATE BASE	NW	NORTHWEST
AC	ASPHALT CONCRETE	OHE	OVERHEAD ELECTRIC
BVC	BEGINNING OF VERTICAL CURVE	PL	PROPERTY LINE
CB	CATCH BASIN	PUE	PUBLIC UTILITY EASEMENT
CL	CLASS	PVI	POINT OF VERTICAL INTERSECTION
℄	CENTERLINE	R	RADIUS
CO	CLEANOUT	RCE	REGISTERED CIVIL ENGINEER
CONC	CONCRETE	ROW	RIGHT OF WAY LINE
DI	DROP INLET	S	SLOPE / SOUTH
E	EAST	SD	STORM DRAIN
ELEV	ELEVATION	SDCB	STORM DRAIN CATCH BASIN
EP	EDGE OF PAVEMENT	SDJB	STORM DRAIN JUNCTION BOX
EVC	END OF VERTICAL CURVE	SDMH	STORM DRAIN MANHOLE
EX	EXISTING	SL	STREET LIGHT
EXP	EXPIRES	SS	SANITARY SEWER
FC	FACE OF CURB	SSLAT	SANITARY SEWER LATERAL
FF	FINISH FLOOR ELEVATION	SQ FT	SQUARE FEET
FG	FINISH GRADE	SSE	SANITARY SEWER EASEMENT
FH	FIRE HYDRANT	SSMH	SANITARY SEWER MANHOLE
FL	FLOW LINE	STA	STATION
GB	GRADE BREAK	STD	STANDARD
GF	GARAGE FLOOR ELEVATION	SW	SIDEWALK
GNV	GROUND, NOT VISIBLE	T	TRASH ENCLOSURE
GP	GUEST PARKING	TC	TOP OF CURB ELEVATION
HP	HIGH POINT	TW	TOP OF WALL ELEVATION
INV	INVERT ELEVATION	TYP	TYPICAL
JP	JOINT POLE	VC	VERTICAL CURVE
L	LENGTH	W	WATER / WEST
LF	LINEAL FOOT/FEET	WM	WATER METER
LP	LOW POINT	WUE	WATER UTILITY EASEMENT
MAX	MAXIMUM	WV	WATER VALVE
N	NORTH		
NCR	NAPA COUNTY RECORDS		
NO	NUMBER		

SHEET INDEX

TM1	COVER SHEET
TM2	EXISTING CONDITIONS
TM3	GRADING PLAN
TM4	GRADING SECTIONS & DETAILS
TM5	UTILITY PLAN

BASIS OF BEARINGS:
THE BEARING OF N28°25'20"E BETWEEN THE FOUND MONUMENTS AS SHOWN ON 26 RS 64, MAP NO. 4142

PROJECT BENCHMARK:
USCGS NO. 410 BRASS DISK ON NORTH WALL OF VASCONI PHARMACY.

ELEVATION 256.58' NGVD 1424

GRAPHIC SCALE
80 0 80 160
(IN FEET)
1 inch = 80 FT

NOTES:
1. ALL FEATURES SHOWN HEREON REPRESENT CONDITIONS OF THE PROJECT AREA AS COMPILED FROM AN AERIAL SURVEY CONDUCTED JANUARY 4, 2010 BY AEROMETRICS SURVEYS AND A SUPPLEMENTAL FIELD SURVEY BY RSA+ IN JUNE OF 2018. NO ATTEMPT HAS BEEN MADE TO DETERMINE THE EXTENT OR EXISTENCE OF UNDERGROUND UTILITIES OR OTHER FEATURES NOT SURFACE VISIBLE, EXCEPT AS SHOWN HEREON.
2. BOUNDARY INFORMATION SHOWN IS FROM A BOUNDARY SURVEY PERFORMED JULY 2010 BY BROOKS AND ASSOCIATES.
3. THE CITY OF ST HELENA COMPREHENSIVE FLOOD PROTECTION PROJECT IS COMPLETE. SUBJECT PROPERTY IS NO LONGER SUBJECT TO INUNDATION BY FLOOD WATERS AND DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
4. THIS MAP SHOWS ALL CONTIGUOUS PROPERTY OF THE OWNERS.
5. THERE ARE NO EXISTING STRUCTURES ON THE SUBJECT PROPERTIES.
6. ALL EXISTING AND PROPOSED EASEMENTS ARE SHOWN.
7. ALL EXISTING AND PROPOSED UTILITIES ARE SHOWN. EXISTING UNDERGROUND UTILITIES AS SHOWN WERE DRAWN FROM RECORD SOURCES ONLY. BURIED PIPES WERE NOT VERIFIED, NOR WAS ANY SUBSURFACE EXPLORATION CONDUCTED.
8. ALL EXISTING UTILITY POLES AND OVERHEAD LINES ARE SHOWN.
9. CONTOUR LINES AS SHOWN ARE AT 1 FOOT INTERVALS.
10. THERE IS NO PHASING PLANNED FOR THIS PROJECT.

GENERAL NOTES

OWNER:	DENNIS HUNTER 900 COLLEGE AVENUE SANTA ROSA, CALIFORNIA 95404 (707) 574-0120
DEVELOPER:	BEN AND KELLY VANZUTPHEN 231 LORRAINE COURT HEALDSBURG, CALIFORNIA 95448 (707) 431-8582
ARCHITECT:	FARRELL-FABER AND ASSOCIATES 1022 MENDOCINO AVENUE SANTA ROSA, CALIFORNIA 95401 (707) 574-3811
CIVIL ENGINEER:	RSA+ 1515 FOURTH STREET NAPA, CALIFORNIA 94559 (707) 252-8601
PARCEL NO:	APN 004-030-057
PARCEL AREA:	16.912 ACRES
EXISTING USE:	VACANT/AGRICULTURE
PROPOSED USE:	RESIDENTIAL
WATER:	CITY OF ST HELENA
SEWER:	CITY OF ST HELENA
EXISTING ZONING:	MR (MEDIUM DENSITY RESIDENTIAL)
PROPOSED ZONING:	MR (MEDIUM DENSITY RESIDENTIAL)
GENERAL PLAN DESIGNATION:	MEDIUM DENSITY RESIDENTIAL

NO.	DATE	REVISIONS	BY	APPD

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NAPA, CALIF. 94559
OFFICE (707) 252-8601
www.RSA-CIVIL.com

HUNTER SUBDIVISION
COVER SHEET
ST HELENA CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
DENNIS WILL STEPHENSON
No. 73257
Exp. 12.31.2022
CIVIL
STATE OF CALIFORNIA

DATE	APRIL 30, 2021
DRAWN	DEL
DESIGNED	BTF
CHECKED	JNS
JOB NO.	4110047.0

SHEET NO.
TM1
1 OF 5 SHEETS

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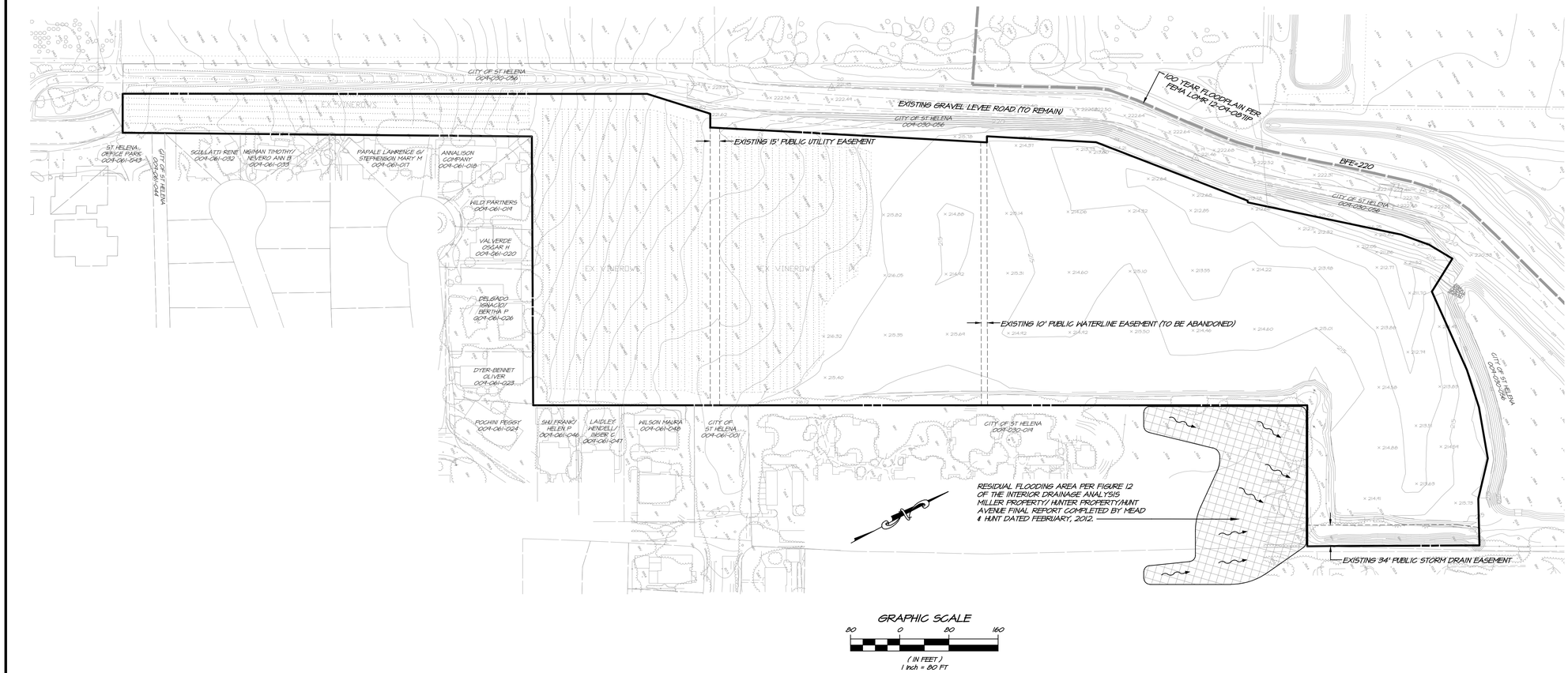
PRELIMINARY-NOT FOR CONSTRUCTION



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HUNTER SUBDIVISION
EXISTING CONDITIONS
ST HELENA CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
No. 73257
Exp. 12.31.2024
CIVIL
STATE OF CALIFORNIA

DATE	APRIL 30, 2021	
DRAWN	DEL	
DESIGNED	BTF	
CHECKED	JNS	
JOB NO.	411C047.LO	

SHEET NO.
TM2
2 OF 5 SHEETS

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EROSION CONTROL

CONSTRUCTION BMP'S
FIBER ROLLS
STORM DRAIN INLET PROTECTION
STABILIZED CONSTRUCTION ENTRANCE/EXIT
OUTDOOR MATERIAL STORAGE AREAS
CONCRETE WASTE MANAGEMENT
PROPER VEHICLE AND EQUIPMENT MAINTENANCE
SLOPE PROTECTION

POST-CONSTRUCTION BMP'S
INLET LABELS "DRAINS TO RIVER"
PRIVATE STREET SWEEPING
DOWNSPOUTS TO LANDSCAPE SWALES
VEGETATED SWALES
HOMEOWNER EDUCATION ON STORM WATER POLLUTION PREVENTION
HYDRODYNAMIC OIL, WATER & SOLID SEPARATOR

NOTE:
THOSE AREAS DRAINING INTO THE EXISTING STORM DRAIN SYSTEM (DIRECTLY DISCHARGING TO THE NAPA RIVER) WILL BE TREATED BY HYDRODYNAMIC SEPARATORS PRIOR TO ENTERING INTO THE EXISTING SYSTEM. THE REMAINING SITE WILL DRAIN INTO THE DETENTION POND (PER THE CITY OF ST HELENA COMPREHENSIVE FLOOD PROTECTION PROJECT) WHICH WILL TREAT THE RUNOFF PRIOR TO BEING DISCHARGED INTO THE NAPA RIVER.

LEGEND

- CURB INLET SEDIMENT BARRIER (1/TM4)
- FIBER ROLL SEDIMENT BARRIER (2/TM4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED
- (A) = TYPE 'A' LOT GRADING (SEE SHEET TM4 FOR DETAILS)
- EX 100 YEAR OVERLAND RELIEF ROUTE

APPROXIMATE RAW EARTHWORK QUANTITIES*

CUT	FILL
10,202 CY	24,350 CY

* DOES NOT INCLUDE COMPACTION AND CONSOLIDATION LOSSES OR TRENCH, PAD OR FOUNDATION SPOILS.

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 inch = 50 FT

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HUNTER SUBDIVISION
GRADING PLAN
ST HELENA CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JAMES A. NOEL III
No. 73057
Exp. 12.31.2020
CIVIL ENGINEER
STATE OF CALIFORNIA

DATE	APRIL 30, 2021
DRAWN	DEL
DESIGNED	EITF
CHECKED	JAS
JOB NO.	411004.0

SHEET NO.
TM3
3 OF 5 SHEETS

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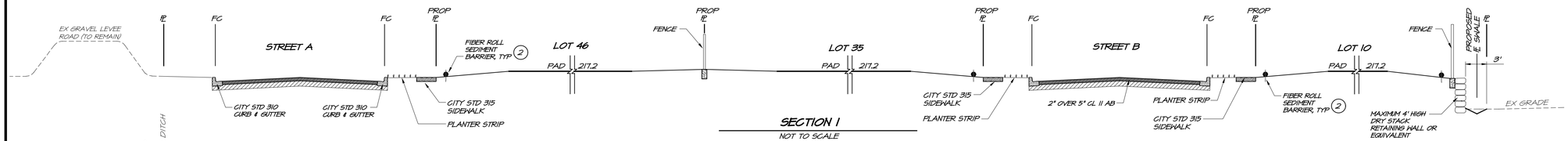
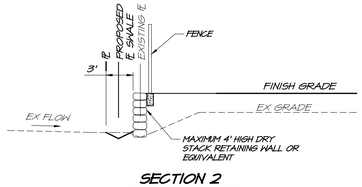


SECTION 1
NOT TO SCALE



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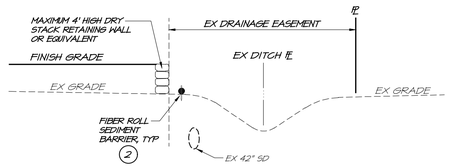

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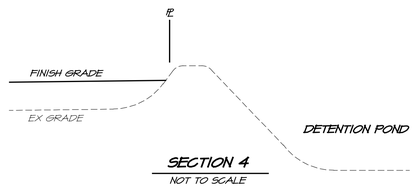
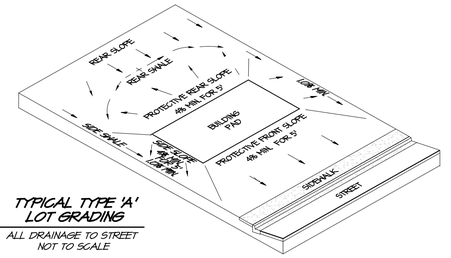
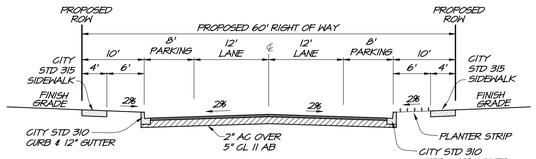


SECTION 4
NOT TO SCALE

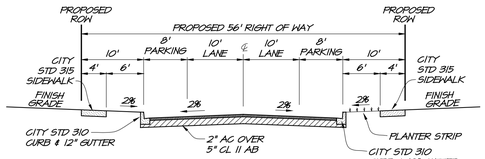
DETENTION POND



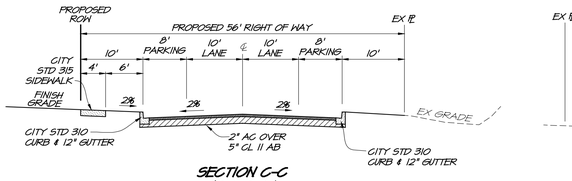
A TYPICAL TYPE 'A' LOT GRADING
ALL DRAINAGE TO STREET
NOT TO SCALE



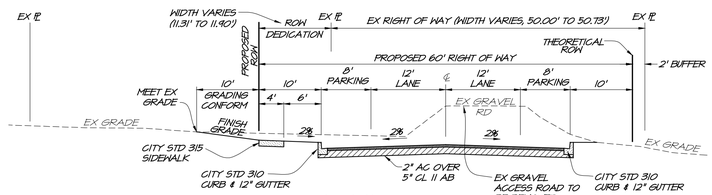
SECTION A-A
(STARR AVENUE)
NOT TO SCALE



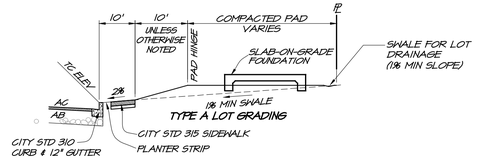
SECTION B-B
(STREET 'B')
NOT TO SCALE



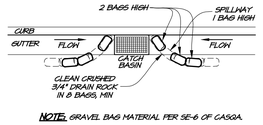
SECTION C-C
(STREET 'A')
NOT TO SCALE



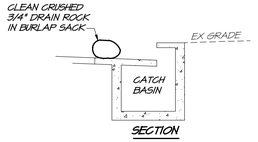
SECTION D-D
(ADAMS STREET)
NOT TO SCALE



TYPICAL STANDARD LOT SECTION
NOT TO SCALE

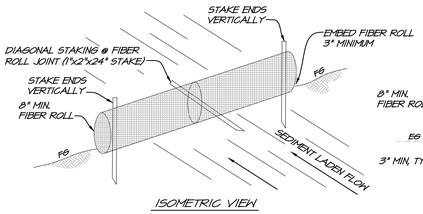


NOTE: GRAVEL BAG MATERIAL PER SE-6 OF CASQA.

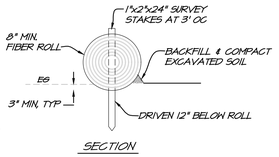


SECTION

1 CURB INLET SEDIMENT BARRIER
NOT TO SCALE



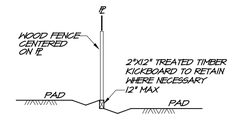
ISOMETRIC VIEW



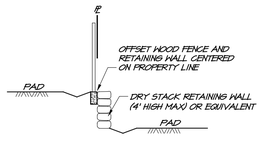
SECTION

NOTE:
PLACE FIBER ROLLS INTO THE KEY TRENCH AND STAKE ON BOTH SIDES OF THE ROLL WITHIN 6 FEET OF EACH END AND THEN 4 FEET WITH 1" x 2" STAKES OR AS SUGGESTED BY MANUFACTURER.

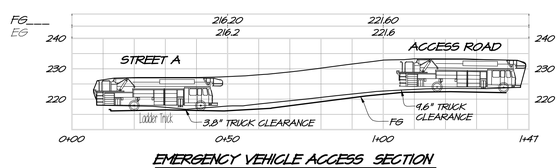
2 FIBER ROLL SEDIMENT BARRIER
RSA EC0000-04 NOT TO SCALE



TYPICAL SIDE YARD GRADING
NOT TO SCALE



TYPICAL SIDE YARD GRADING WITH RETAINING WALL
NOT TO SCALE



EMERGENCY VEHICLE ACCESS SECTION
SCALE: 1" = 20'

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HUNTER SUBDIVISION
GRADING SECTIONS AND DETAILS
ST HELENA CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — No. 73257 — Exp. 12.31.2022 — CIVIL — STATE OF CALIFORNIA

DATE	APRIL 30, 2021
DRAWN	DEL
DESIGNED	BTF
CHECKED	JNS
JOB NO.	411004.1.0

SHEET NO.
TM4
4 OF 5 SHEETS

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PIPE DESIGN SLOPES

SEWER		
8"	=	0.0033
6"	=	0.0050
STORM DRAIN		
15"	=	0.0035
18"	=	0.0025
24"	=	0.0026
30"	=	0.0025

(UNLESS OTHERWISE NOTED)

NOTES

1. ALL PARCELS SHALL BE SERVED BY A SEPARATE SEWER LATERAL. ALL EXISTING SERVICES INCLUDING SEPTIC SYSTEMS TO EXISTING STRUCTURES WITHIN THE PROJECT AREA SHALL BE ABANDONED.
2. ALL PARCELS SHALL BE SERVED OFF THE NEW WATERLINE IN THE PROPOSED STREET. ALL EXISTING SERVICES TO EXISTING STRUCTURES WITHIN THE PROJECT AREA SHALL BE ABANDONED.

SEE BELOW

ADAMS STREET (PUBLIC) 15" SD

8" SS

8" W

BEARD

SDCB INV 221.0

EX SDMH EX RIM 222.6± EX INV 211.3±

SSMH RIM 223.1± INV 210.4

SDMH RIM 220.8± INV 211.7±

SSMH RIM 220.5± INV 216.5

SDCB INV 221.20

M. COOKE

EX FH

EX 36" SD

12" PVC WATERLINE

ABANDONED 12" AC PIPE OFF-SITE TO REMAIN

CITY OF ST HELENA 004-030-056

EX ROAD

EVA

CARPENTER RANCHERY

LOT 51

LOT 1

LOT 52

LOT 2

LOT 3

LOT 4

STARR AVENUE (PUBLIC)

STREET A (PUBLIC)

15" SD

8" SS

8" W

SSCO RIM 216.7± INV 212.5

SDCB INV 212.9

SDCB INV 213.0

SSMH RIM 216.6± INV 211.1

SDCB INV 212.7

SDCB INV 211.9

SSMH RIM 215.8± INV 210.6

SDCB INV 212.1

SSMH RIM 214.7± INV 209.29

SDCB INV 211.1

SDCB INV 211.3

LOT 41

LOT 42

LOT 43

LOT 44

LOT 45

LOT 46

LOT 47

LOT 48

LOT 49

LOT 50

LOT 40

LOT 39

LOT 38

LOT 37

LOT 36

LOT 35

LOT 34

LOT 33

LOT 32

LOT 31

LOT 30

LOT 29

LOT 28

LOT 27

LOT 26

SSMH RIM 219.6± INV 214.6

ABANDONED 12" AC PIPE ON-SITE TO BE REMOVED

EX SDMH EX RIM 218.4± EX INV 212.7±

SDCB INV 212.8

SDCB INV 212.6

SDCB INV 213.0

SSMH RIM 216.5± INV 211.2

SDCB INV 212.2

SSMH RIM 215.4± INV 210.2

SDCB INV 211.4

SDCB INV 210.8

SDCB INV 210.6

SDCB INV 209.8

PROPOSED 25' PUBLIC SD EASEMENT

30" SD

CITY OF ST HELENA 004-030-056

HEADWALL (OUTLET) INV 204.6

STREET B (PUBLIC) 18" SD

24" SD

SSCO RIM 216.9± INV 211.5

SDCB INV 213.2

SDCB INV 212.4

SDCB INV 211.8

SSMH RIM 214.4± INV 209.2

SDCB INV 211.4

SDMH RIM 214.3± INV 210.5

SSMH RIM 214.1± INV 208.3

LOT 5

LOT 6

LOT 7

LOT 8

LOT 9

LOT 10

LOT 11

LOT 12

LOT 13

LOT 14

LOT 15

LOT 16

LOT 17

LOT 18

LOT 25

LOT 24

LOT 23

LOT 22

LOT 21

LOT 20

LOT 19

EX 15" UTILITY EASEMENT

SDMH RIM 217.1± INV 213.4

15" SD

SDCB INV 213.5

SSMH RIM 217.5± INV 213.54

SHU FRANK/ HELEN P 004-061-046

LAIDLEY, WENDELL/ INGER C 004-061-047

WILSON MAURA 004-061-048

CITY OF ST HELENA 004-061-001

ABANDONED 12" AC PIPE ON-SITE TO BE REMOVED

CITY OF ST. HELENA TO REROUTE WATER LINE PER DECEMBER 9, 2008 STAFF REPORT, PAGE 8, SECTION 1.7(a)

CITY OF ST HELENA 004-030-019

END OF WATERLINE CAPPED

EX BLOW-OFF

ABANDONED 12" AC PIPE OFF-SITE TO REMAIN

PROPOSED 3' SD EASEMENT

HEADWALL INV 211.5

EX WELL TO REMAIN, ROUTE WATER TO 8" WATER MAIN. PROVIDE POWER FROM UNDERGROUNDED LINES

PROPOSED 10' SD EASEMENT

EX OVERHEAD TRANSFORMER TO BE REMOVED

EX 8" W

EX 12" SD

EX 6" SS

EX SSMH RIM 219.0± INV 213.0±

EX SSMH RIM 219.1± INV 212.7

EX SSMH

EX 8" SD (TO BE REMOVED)

EX 30" SD

EX 8" W

EX 12" SS

EX 6" SS

EX 15" SD

SSMH RIM 215.2± INV 206.9

SSMH RIM 212.0± INV 206.7

PROPOSED 15' PUBLIC SS EASEMENT

SSMH RIM 212.0± INV IN 206.0 (PROPOSED)

CITY OF ST HELENA 004-030-056

36'

10' PUE

8'

11.5'

11.5'

5'

3' MIN COVER

W

SS

SD

TYPICAL UTILITY LOCATIONS

56' RIGHT OF WAY STREETS

NOT TO SCALE

40'

13.5'

13.5'

TYPICAL UTILITY LOCATIONS

60' RIGHT OF WAY STREETS

NOT TO SCALE

SSMH RIM 243.0± INV 239.0

CITY OF ST HELENA 004-030-056

SDCB INV 235.1

SSMH RIM 231.9± INV 232.9

FULTON WINERY

SDCB INV 229.9

SSMH RIM 230.9± INV 226.0

SEE ABOVE

CONNECT TO EX 8" WL

ADAMS STREET (PUBLIC)

SDCB INV 235.9

SDCB INV 230.1

EX CBMH'S AT ADAMS STREET CONFORM TO BE RELOCATED TO NEW CURB LINES

ST HELENA OFFICE PARK 004-061-043

GRAPHIC SCALE

50 0 50 100

(IN FEET)

1 inch = 50 ft

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(Title)

HUNTER SUBDIVISION
UTILITY PLAN
ST HELENA CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER JEREMY NOEL FIX No. 73257 Exp. 12.31.2022 CIVIL ENGINEER STATE OF CALIFORNIA

DATE	APRIL 30, 2021	
DRAWN	DEL	
DESIGNED	BTF	
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JOB NO.	4110041.0	

SHEET NO.

TM5

5 OF 5 SHEETS

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Hunter Subdivision: 1993 General Plan Consistency

1993 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information	
Land Use		
Land Use Map The General Plan Land Use Map designates the site for Medium Density Residential, with a density range of 5.1 to 12.0 units per gross acre. Applied to the proposed project, a minimum of 87 units and a maximum 270 units could be built in conformance with the Proposed Land Use Diagram.	The proposed subdivision map includes 51 lots for single family homes and a separate parcel for development with multi-family attached units. The applicant proposes to develop the project with the following: • 51 single family homes • 11 accessory dwelling units (on 11 of the 51 single family lots) • 25 multi-family units If constructed with these types and numbers of units, the project would conform with the minimum density required by the General Plan. There are other alternative scenarios which would achieve the minimum density; the proposed subdivision map does not preclude achieving the minimum residential density required by the General Plan. Conformance with the required General Plan density will be confirmed at the time an Affordable Housing Agreement and development plans are submitted for review and approval.	✓
2.6.1 New development should be required to occur in a logical and orderly manner within well-defined boundaries, and be consistent with the ability to provide urban services.	The proposed project is adjacent to existing development, extends existing roadways, and can be provided with all required services, including sewer, water, police, and fire.	✓
2.6.2 Urban development shall be allowed to occur only within the Urban Service Area during the time frame of the General Plan.	The proposed subdivision is within the Urban Service Area.	✓
2.6.3 Urban services such as sewer, water, and storm drainage will only be extended to development within the Urban Service Area.	The proposed subdivision is within the Urban Service Area.	✓

1993 General Plan Policies		Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information	
	Exceptions will be permitted when undue hardship can be demonstrated, and proposed improvements are not found to be growth inducing.		
Tourism			
3.4.10	Work with the County to establish a Valley-wide bicycle trail network that will allow users to circulate without placing additional demand on local streets, and will allow visitors to travel within the Valley from a centrally-parked vehicle.	Proposed conditions of approval require that Starr Avenue and Adams Street include on-street bike lanes.	✓
Community Design			
4.3.5	Require future residential development to conform to the pattern and density of older, neighboring areas of town in order to complement existing town character and ensure that densities are high enough to protect against unnecessary incursion into vineyard agricultural areas.	The proposed subdivision is consistent with the density requirements of the site's General Plan land use designation.	✓
4.4.1	Use the grid pattern of street layout as the template for future developing areas. Streets should be straight, should meet at right angles, and cul-de-sacs and a suburban pattern should be avoided.	The proposed street layout follows a grid pattern as much as possible, given the site's shape and the location of adjacent connecting streets. One cul-de-sac is included in the proposed subdivision where no other street pattern is feasible.	✓
4.4.2	When reviewing development proposals in areas not already served by a system of streets, City staff shall ensure that proposed development is sited in such a manner that it	The proposed subdivision has been reviewed by the Public Works department for consistency with the City's planned roadway system. The tract will complete the planned roadway system by extending and connecting Adams Street and Starr Avenue.	✓

1993 General Plan Policies		Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information	
	will not obstruct the logical extension of existing streets and infrastructure, or the expansion of the City's grid-like pattern of streets into newly developing areas. As with existing street patterns, new extensions of the city grid need not be rigid in their dimensions and layout, but should be evaluated on their contribution to the formation of a logical, interconnected system of streets that facilitates the safe and efficient flow of pedestrian, bicycle, and vehicular traffic, and establishes an attractive neighborhood environment. Staff can consider variations to the logical extension of existing streets if the project proponent can demonstrate that safety, aesthetics, topography, or other factors make such an extension ineffective or undesirable, or that such an extension would cause the landowner undue hardship.		
4.5.1	The sense of a strong connection to the surrounding agricultural open space and hillsides must be preserved in the future. Views of vineyard, hillsides, creeks and major landscape features should be maintained.	Views of the vineyards to the north of the proposed subdivision are currently available from the levee road, which will not be affected by the proposed project.	✓
4.6.2	Discourage the use of cul-de-sacs. Where cul-de-sacs are necessary, do not allow houses to block views out to the vineyards. View corridors	The proposed subdivision includes one cul-de-sac with six homes in a location where no other street connection to avoid a cul-de-sac is available.	✓

1993 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information	
out from the ends of streets should be preserved.		
4.7.3 The new eastern entry via the Adams extension should be planned to maximize open space and vineyard views. Where possible, vineyards should be maintained up to the road edge. Residential development should front on the road with sufficient lot depth to allow a generous setback for sound and privacy. Large specimen street trees should be planted in residential areas to mitigate the scale of the street and encourage pedestrian and bicycle movement.	The proposed project extends Adams Street to connect with the northward extension of Starr Avenue, but does not otherwise affect the layout or design of the future extension of Adams Street.	✓
Transportation		
5.3.2 Add the following streets to the existing system: • Adams Street from its current eastern terminus to Silverado Trail • McCorkle Avenue from Mariposa Lane to the extension of Starr Avenue • Oak Avenue from Mitchell Drive to Grayson A venue • Library Lane from its current terminus to Fulton Lane • An unnamed new street located east of Edwards Street connecting Hunt Avenue and Pope Street • Starr Avenue from the extension of Adams Street to the Urban Limit Line	The proposed project will extend Adams Street to connect with the northward extension of Starr Avenue, helping to implement this policy.	✓

1993 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information	
5.3.3 Preserve rights-of-way for future collector streets within the planning area of the City as follows: • Starr Avenue from Pratt Avenue to Adams Street and from the Urban Limit Line to Dowdell Lane • Mills Lane from SR 29 to Starr Avenue, including a potential realignment with Grayson Avenue at SR 29 • Oak Avenue from Vidovich Avenue to Grayson Avenue	The proposed project will extend Starr Avenue to connect with the eastward extension of Adams Street, helping to implement this policy.	✓
5.4.1 Service Level C shall be maintained at all signalized intersections in St Helena except along Main Street, where Service Level D shall be permitted. Exceptions to this policy are that lower service levels shall be permitted at any location where the existing service level does not meet this standard; in these locations, the Service Level shall not be lower than that shown in Table 5-3. The City Council may also allow an exception to this policy if it finds overriding circumstances which make maintenance of this policy impractical or infeasible.	According to the project's traffic analysis, the proposed project would add traffic to several intersections where the existing level of service is D or F: • Main Street/Pope Street-Mitchell Dr. • Paseo Grande-College Ave/Pope Street • Silverado Trail/Pope Street Traffic from the proposed project would not cause the level of service to exceed C at any additional intersections. Because the project would not create any new exceedences, but would only add vehicles to locations where LOS C is already exceeded, the project does not violate this policy.	✓
5.4.2 Service Level C is a goal at stop-sign-controlled intersections. If the Service Level degrades below Level C, an evaluation of the need for traffic signalization shall be	According to the project's traffic analysis, the proposed project would add traffic to several intersections where the existing level of service is D or F: • Main Street/Pope Street-Mitchell Dr.	✓

1993 General Plan Policies		Consistency Analysis ✓ – Consistent ✖ – Inconsistent ? – Insufficient Information	
	undertaken according to standard CAL TRANS signal warrants. If signals are not initially warranted, the location shall continue to be monitored for signal warrants on a regular basis.	• Paseo Grande-College Ave/Pope Street • Silverado Trail/Pope Street Traffic from the proposed project would not cause the level of service to exceed C at any additional intersections. Because the project would not create any new exceedences, but would only add vehicles to locations where LOS C is already exceeded, the project does not violate this policy.	
5.5.1	Collector Streets: All collector streets designated in the Circulation Diagram should be developed with one lane in each direction for moving traffic. Rights of way for a parking lane and sidewalks shall also be provided on each side. In undeveloped areas without development constraints, the right-of-way width for collector streets shall be 60 feet. The City Engineer may at his discretion require additional right-of-way at selected locations to permit inclusion of left-tum lanes.	The proposed project will extend Adams Street and Starr Avenue, which are both shown as collector streets on the Street System Heirarchy diagram. These roadways have been reviewed by the Public Works department, and conditions of approval are included which specify Public Works' required improvements.	✓
5.5.2	Local streets in newly developing areas should be laid out in a manner consistent with the grid system currently in place in the older portions of St Helena and in conformance with adopted City standards. Care should be taken to insure that these grids contain enough discontinuity to discourage their use by non-local traffic. Local streets should have a paved width of 36 feet with a ten-foot wide	The proposed street layout follows a grid pattern as much as possible, given the site's shape and the location of adjacent connecting streets. Proposed street widths have been reviewed by the Public Works department.	✓

1993 General Plan Policies		Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information	
	area adjacent to curb for sidewalk and landscaping.		
5.8.1	All new development on collector streets shall provide sidewalks or walkways to be located with the City's right-of-way for the collector street. Further, unless exempted or deferred by the City Council, all residential developments shall provide sidewalks on all local streets within the development.	All roadways in the proposed subdivision include sidewalks.	✓
5.8.2	The City shall develop a system of bicycle routes to be located on collector streets and along open space corridors. In the interest of safety, bicycles shall be discouraged from using Main Street and shall be encouraged to use other parallel streets.	Proposed conditions of approval require that Starr Avenue and Adams Street include on-street bike lanes.	✓
5.10.1	All new collector streets shown in the Circulation Diagram shall be constructed as development occurs along the proposed streets. The exception to this policy is that the City Council may require additional construction to reinforce system continuity.	The proposed project will extend Adams Street and Starr Avenue, which are both shown as collector streets on the Street System Hierarchy diagram. These roadways have been reviewed by the Public Works department, and conditions of approval are included which specify Public Works' required improvements.	✓
5.10.2	The City desires that the Adams Street extension to Silverado Trail be completed in an expeditious manner; the City will work with potential developers to acquire the needed combination of public	The proposed project will extend Adams Street eastward from its current terminus, contributing to the implementation of this policy.	✓

1993 General Plan Policies		Consistency Analysis ✓ – Consistent ✖ – Inconsistent ? – Insufficient Information	
	and private financing required to implement this project.		
Public Health and Safety			
8.5.7	Ensure that all streets and roads are adequate in terms of width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide alternative emergency ingress and egress.	The proposed subdivision has been reviewed by the Public Works and Fire departments for consistency with City roadway standards.	✓
8.5.8	Require all new development plans to be approved by the Fire Department prior to issuance of building permits, grading permits, or final map approval.	The final map will be reviewed prior to approval by the City Council.	✓
Public Facilities and Services			
9.3.2	Require all new units, except those in Woodlands and Watershed Districts, on parcels less than 2 acres to connect to the City sewer. All existing units within 200 feet of an existing sewer shall connect to the City sewer whenever feasible. Many of the residential units cannot expand without abandoning the on-site septic system and connecting to the sewer which may, in some cases, require an extension of the sewer.	All homes in the proposed subdivision will be served by the City sewer system.	✓
9.4.1	New development should provide adequate drainage improvements to handle generated storm runoff from the site to the nearest major watershed. The watersheds	The proposed subdivision has been reviewed by the Public Works for consistency with City storm drainage requirements. Drainage from the proposed project will be directed to an adjacent City flood control basin which empties into the Napa River.	✓

1993 General Plan Policies		Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information	
	include York Creek, Sulphur Creek and the Napa River.		
9.4.6	Standards for subdivisions should include the following: 1. All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood. 2. All final subdivision plans will provide the elevation of proposed structure(s) and pads. If the site is filled above the base flood. The final pad elevation shall be certified by a registered civil engineer or surveyor and provided to the floodplain administrator. 3. All subdivision proposals shall be consistent with the need to minimize flood damage. 4. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage. 5. All subdivisions shall provide adequate drainage to reduce exposure to flood hazards.	The proposed subdivision has been reviewed by various City departments for conformance with all applicable requirements.	✓
9.6.6	Approval of residential, commercial, or industrial development may be conditioned upon the mitigation of the impact of such development on the St Helena Unified School	The conditions of approval require the payment of all applicable development impact fees, including school impacts fees.	✓

1993 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent ? – Insufficient Information	
District's ability to serve school age children.		
Parks and Recreation		
10.3.1 Enhance the quality of life and environment in St Helena through the provision of adequate parks and recreation facilities commensurate with a community of St. Helena's size and demographic composition.	The proposed subdivision does not include a public park, but will include private open space areas for individual homes and in the proposed multi-family development. The conditions of approval also require the payment of park impact fees to contribute to the development or improvement of City parks.	✓
10.3.5 Encourage developers to provide open space and recreational facilities as part of new residential developments. The City may consider density bonuses for the inclusion of significant public recreational facilities in new development.	The proposed project is too small to provide for the inclusion of an onsite public park, but will pay park impact fees to provide funding for other City parks.	✓

Hunter Subdivision: 2019 General Plan Consistency

2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
Land Use		
Land Use Map The General Plan Proposed Land Use Diagram designates the site for Medium Density Residential, with a density range of 5.1 to 16.0 units per acre. Applied to the proposed project, a minimum of 87 units and a maximum 270 units could be built in conformance with the Proposed Land Use Diagram.	The proposed subdivision map includes 51 lots for single family homes and a separate parcel for development with multi-family attached units. The applicant proposes to develop the project with the following: • 51 single family homes • 11 accessory dwelling units (on 11 of the 51 single family lots) • 25 multi-family units If constructed with these types and numbers of units, the project would conform with the minimum density required by the General Plan. There are other alternative scenarios which would achieve the minimum density; the proposed subdivision map does not preclude achieving the minimum residential density required by the General Plan. Conformance with the required General Plan density will be confirmed at the time an Affordable Housing Agreement and development plans are submitted for review and approval.	✓
LU1.1 Require new development to occur within well-defined boundaries and be consistent with the ability to provide urban services. New development should mitigate infrastructure impacts by using sustainable, best management practices in green building and stormwater management and paying its share of development impact fees, while minimizing impacts on sewer, water, energy, and natural resources.	The proposed project is adjacent to existing development, extends existing roadways, and can be provided with all required services, including sewer, water, police, and fire.	✓
LU1.2 Allow urban development to occur only within the Urban Limit	The proposed subdivision is within the Urban Service Area.	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
Line. Consider an exception for on-site employee housing on Agricultural lands. Urban services, such as sewer, water, and storm drainage, will only be extended to development within the Urban Limit Line.		
LU1.5 Require new development to provide adequate infrastructure and urban services, including compliance with the policies and implementing actions affecting new development as set forth in the Public Facilities and Services Element.	The proposed subdivision is required to install all infrastructure and facilitate the provision services.	✓
LU2.1 Promote a mix of housing types and price ranges that are consistent with the Housing Element RHNA categories of housing affordability.	The proposed project includes market-rate single family homes and two types of units intended to be more affordable: accessory dwelling units and multi-family units.	✓
LU2.3 Protect residential neighborhood views of surrounding vineyards and mountains.	The proposed project will change the appearance of the site and affect some views, but retains views to the extent possible while allowing development to occur.	✓
LU2.7 Ensure safe, walkable, and bikeable residential neighborhoods and vibrant, livable streets.	The proposed subdivision includes sidewalks and in-street bike lanes. Design of the homes and details regarding landscaping will be reviewed in future applications.	✓
LU2.D Continue to require residential developers to contribute to the provision of community facilities and services (e.g. parks, recreation facilities and programs, education facilities, traffic and transportation facilities, and services), consistent with State law requiring a nexus between project impacts and required mitigation.	Conditions of approval require the applicant to pay all applicable development impact fees.	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
Economic Sustainability		
ES1.4 Encourage the creation of workforce housing to support the local employment base in keeping with small town smart growth.	The proposed project includes market-rate single family homes and two types of units intended to be more affordable: accessory dwelling units and multi-family units.	✓
Public Facilities and Services		
PF1.1 Require that the approval of new development be contingent upon the ability of the City to provide water without exceeding the safe annual yield of its water supply system.	The proposed project will use an on-site well for irrigation uses (reducing domestic water use) and is also required to implement water system improvements to achieve water neutrality prior to the issuance of building permits.	✓
PF1.L Require that all new residential housing projects incorporate "best practices" for minimizing water usage.	The proposed project will be required to adhere to all applicable codes and requirements related to water conservation through the building permit review process.	✓
PF2.1 Ensure adequate sewage treatment capacity at the City treatment plant to meet the needs of population growth, taking into account the City's Growth Management System, the Regional Housing Needs Allocation, and the needs of non-residential users.	A study of sewer capacity prepared for the project's environmental impact report confirmed that capacity is available to serve the proposed project.	✓
PF2.A Require all new units on parcels less than two acres, except those in the Woodlands and Watershed District, to connect to the City sewer. All existing units within 200 feet of an existing sewer shall connect to the City sewer whenever feasible. Many of the residential units cannot expand without abandoning on-site septic systems and connecting to the sewer which may, in some cases, require an extension of the sewer.	All homes in the proposed subdivision will be required to connect to the City sewer system. The applicant is required to install all required sewer lines to serve the proposed homes.	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
PF2.C Urban services such as sewer, water, and storm drainage will only be extended to development within the Urban Limit Line. Exceptions will be permitted when undue hardship can be demonstrated and when proposed improvements are not found to induce growth.	The proposed project is within the Urban Limit Line.	✓
PF3.1 Ensure that new developments provide adequate drainage improvements and detention to mitigate flooding from increased stormwater runoff attributable to the development.	The proposed project will provide all required onsite drainage facilities to carry stormwater to the adjacent City storm drainage basin, which was designed to accommodate runoff from the site in a developed condition.	✓
PF3.C Consistent with Municipal Code Section 16.32.170, continue to prohibit the creation of new residential lots that will be subject to periodic inundation from floodwaters. New development proposals on existing lots of record must identify flood hazard areas and mitigate all impacts to base flood levels and potential flood damage from grading, filling, and construction through proper drainage, construction, and location of utilities, in accordance with FEMA requirements.	The project is not subject to inundation, due to the construction of the Napa River levee and the adjacent City storm basin.	✓
PF5.4 Require that the approval of residential, commercial, or industrial development be contingent upon the mitigation of the impact of such development on the St. Helena Unified School District's ability to serve school-age children.	The proposed project is required to pay all applicable development impact fees, including school impact fees.	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
PF5.A Assist the School District in collecting school facility development fees generated by new development. Partner with the District to identify, establish, and implement additional measures to ensure that the highest quality of education is provided.	The proposed project is required to pay all applicable development impact fees, including school impact fees.	✓
Transportation		
CR1.9 Promote a walking and bicycling environment that is comfortable and convenient. Ensure that all St. Helena streets have no more than a single through-automobile lane in each direction, plus a single left-hand turning lane where appropriate, even if this requirement increases vehicle travel times. Allow exceptions if an extra lane would reduce the possibility of collisions.	The proposed project includes roadways consistent with this policy.	✓
CR2.1 Create a comprehensive bicycle and pedestrian network that enhances neighborhood connectivity. Develop the system as shown in Figure 5.4 to expand and improve the pedestrian and bikeway system.	The proposed subdivision is required to provide bike lanes in Starr Avenue and Adams Street that implement the General Plan bikeway system shown in Figure 5.4.	✓
CR2.C Require any new development and modifications to existing projects to provide bicycle and pedestrian improvements and amenities, consistent with adopted Engineering Standards and the St. Helena Bicycle Plan.	The proposed subdivision is required to provide bike lanes in Starr Avenue and Adams Street that implement the General Plan bikeway system shown in Figure 5.4.	✓
CR3.6 Support development of the bikeway and pedestrian networks to provide a convenient	The proposed subdivision is required to provide bike lanes in Starr Avenue and Adams Street that	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
opportunity for at least 20 percent of commuters to get to work by walking or bicycling.	implement the General Plan bikeway system shown in Figure 5.4.	
Historic Resources		
The project does not contain or affect historic resources.		**NA**
Community Design		
CD1.1 Ensure high-quality design and construction through a robust design review process.	Design of residences built within the proposed subdivision will be reviewed as part of subsequent Design Review and Conditional Use Permit reviews for conformance with City policies and standards.	✓
CD1.8 Require, to the extent feasible, that all new development include underground utilities to minimize their negative visual impact. In addition, funding sources to underground electrical lines shall be sought so the undergrounding of existing overheard lines can occur over time.	The proposed project is conditioned to place all utilities underground.	✓
CD3.1 Limit building envelope sizes and require adequate side and rear setbacks to preserve the character of existing residential areas and to avoid overbuilt lots. Require future development to conform to the pattern and density of the neighboring areas. In order to complement existing town character and protect against incursion into vineyard agricultural areas.	Design of residences built within the proposed subdivision will be reviewed as part of subsequent Design Review and Conditional Use Permit reviews for conformance with City policies and standards.	✓
CD3.2 Ensure that new residential designs contribute positively to existing neighborhoods by complementing character and incorporating design features,	Design of residences built within the proposed subdivision will be reviewed as part of subsequent Design Review and Conditional Use Permit reviews for conformance with City policies and standards.	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
such as front porches, façade articulation and stepbacks.		
CD5.1 Preserve the visual and physical connection to agriculture by protecting views from streets, parks, and open spaces to vineyards, agriculture, and hillsides. Where new streets are extended adjacent to agriculture, encourage hillside, and vineyard views by maintaining agricultural activities at the road edge. Existing east and west entries should be maintained in their current appearance, protecting and improving views of vineyards and the surrounding hillsides wherever possible.	The proposed project will change the appearance of the site and affect some views, but is consistent with retaining views while allowing development to occur.	✓
CD6.1 Ensure a connected circulation system that maximizes pedestrian and bicycle connectivity.	The proposed project includes sidewalks on all streets and bike lanes that implement the City's bikeway master plan.	✓
CD6.2 Promote the inclusion of bicycle and pedestrian trails and bicycle lanes throughout the City, as well as connections to regional trail systems, such as the Napa Valley Vine Trail.	The proposed project includes sidewalks on all streets and bike lanes that implement the City's bikeway master plan.	✓
Open Space and Conservation		
OS1.1 Preserve and enhance St. Helena's riparian corridors for their value in providing wildlife habitat, biodiversity, natural drainage, and visual amenity.	The proposed project does not directly or indirectly affect any riparian corridor.	✓
Public Health, Safety and Noise		
PS1.4 Promote an optimized land use development pattern that minimizes cumulative air quality	The proposed project is consistent with the General Plan Land Use policy map.	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
impacts from proposed developments.		
PS2.B Enforce the Land Use Compatibility Standards presented in the State of California's General Plan guidelines when siting new uses. These standards identify the acceptability of a project based on levels of noise exposure.	Based on the analysis in the project's environmental impact report, the proposed development is consistent with applicable noise standards.	✓
PS2.C Adopt and enforce Title 24 Standards for all types of new residential construction, including single family dwellings, duplexes, apartments, and dormitories.	Conformance with Title 24 standards will be determined at the time of building permit review.	
PS2.D Require an acoustical study, prepared by a qualified acoustical consultant for: • All proposed projects that are likely to be exposed to noise levels greater than the standards; • All proposed projects that would generate noise where impacts on other uses would be greater than the standards; • Any project exposed to outdoor noise at or above a day-night average sound level (Ldn) of 60 or for any noise source that could create such outdoor noise levels for adjacent uses; and • Any project exposed to or that creates noise which may exceed the adopted City standards.	A noise analysis of the proposed project is included in the project's environmental impact report.	✓
PS3.1 Minimize risk of injury, loss of life and property damage from	The proposed project will be required to conform with all applicable building codes, and all	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
seismically induced and other known geologic hazards.	construction plans will be reviewed at the time of building permit review.	
PS3.3 The required soils and geologic reports for new development shall include geotechnical analysis for construction in areas with potential geological hazards and/or for purposes of environmental analysis. The analysis shall investigate all potential geo-hazard issues for the site where there is substantial evidence of a potential risk. **PS3.4** Geologic reports for new development shall describe hazards and include mitigation measures to reduce risks to acceptable levels. Where appropriate, an engineer's or geologist's certification shall be required stating that risks have been mitigated to an acceptable level.	A geotechnical analysis conforming with these requirements is included in the project's environmental impact report.	✓
PS3.A Require a soils and geologic report to be submitted for new construction prior to the issuance of grading and building permits and the submission of final maps.	The proposed project is required to provide these reports prior to final map recordation.	✓
PS3.B Prohibit any development—including any land alteration, grading for roads, and structural development—in areas of slope instability or other geologic concerns until mitigating measures are taken to limit potential damage to levels of acceptable risk.	The proposed project does not involve any areas of unstable slopes or other geologic concerns.	✓
PS3.E All development and construction proposals shall be reviewed by the City to ensure	Review of construction proposals will take place at the time that plans are submitted.	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
conformance to applicable building standards. Recommendations of the geotechnical analysis shall be implemented.		
PS4.6 Ensure that all streets and roads are adequate in terms of width, turning radius, and grade in order to facilitate access by City firefighting apparatus, and to provide alternative emergency routes of ingress and egress.	The proposed subdivision has been reviewed by the Fire Department for conformance with all applicable standards.	✓
PS5.1 Minimize the risk to people, property and the environment caused by flooding hazards. Site new development to minimize potential damage from a 100-year flood. Continue to require that any new development is constructed FEMA standards. Prohibit the siting of uses within Flood Hazard Areas inconsistent with FEMA standards that could result in health and safety hazards, including those due to the release of chemicals or other substances as a result of inundation or erosion. Ensure that any new flood protection projects comply with federal and State standards.	The adjacent Napa River levee was designed and constructed to provide protection from a 200-year storm, exceeding the protection required by this policy.	✓
Climate Change		
CC1.1 Promote a "walkable" and "bikeable" city.	The proposed project includes sidewalks on all streets and bike lanes that implement the City's bikeway master plan and will help promote walking and biking.	✓

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2019 General Plan Policies	Consistency Analysis ✓ – Consistent ✖ – Inconsistent **?** – Insufficient Information **NA** – Not Applicable	
Parks and Recreation		
PR1.4 Require park land dedications or civic improvement fees on all new residential, commercial, and industrial developments to meet the standard of 5.0 acres of parks per 1,000 residents.	The proposed project is required to pay all applicable development impact fees, including park fees.	✓
PR6.1 Promote walking and bicycling as safe and convenient modes of transportation.	The proposed project includes sidewalks on all streets and bike lanes that implement the City's bikeway master plan and will help promote walking and biking.	✓
PR6.2 Develop a comprehensive network of bicycle and pedestrian trails to enhance bicycle and pedestrian connectivity throughout the city and the region.	The proposed project includes sidewalks on all streets and bike lanes that implement the City's bikeway master plan. The project does not affect the existing public trail on the levee road adjacent to the site.	✓
PR6.3 Promote the inclusion of bicycle and pedestrian trails, and bicycle lanes throughout the city, as well as connections to regional trail systems, such as the Napa Valley Vine Trail.	The proposed project includes sidewalks on all streets and bike lanes that implement the City's bikeway master plan. The project does not affect the existing public trail on the levee road adjacent to the site.	✓
Parks and Recreation		
This Element does not include policies which apply directly to this project.		**NA**

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ENVIRONMENTAL IMPACT REPORT
for the
Hunter Subdivision Project

SCH no. 2018032014

Prepared for

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SEPTEMBER 2021

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Environmental Impact Report
for the
Hunter Subdivision Project
SCH No. 2018032014

Volume I

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AAQS	ambient air quality standards
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADU	accessory dwelling unit
AFY	acre-feet per year
amsl	above mean seal level
AP Act	Alquist–Priolo Earthquake Fault Zoning Act
APE	area of potential effects
ASTM	American Society of Testing and Materials
BAAQMD	Bay Area Air Quality Management District
BASMAA	Bay Area Stormwater Management Agencies Association
bgs	below ground surface
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CHHSL	California Human Health Screening Level
CHRIS	California Historical Resources Information System
City	City of St. Helena
cm	centimeter
cmbs	centimeters below the surface
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent

Acronym/Abbreviation	Definition
County	County of Napa
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DOC	California Department of Conservation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Authority
GHG	greenhouse gas
GPR	ground-penetrating radar
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWP	global warming potential
HAP	hazardous air pollutant
HCFC	hydrochlorofluorocarbon
HDR	High-Density Residential
HFC	hydrofluorocarbon
HVAC	heating, ventilation, and air conditioning
ISTEA	Intermodal Surface Transportation Efficiency Act
kWh	kilowatt-hour
LE	Land Evaluation
LESA	Land Evaluation and Site Assessment
LOMR	Letter of Map Revision
m	meter
MBTA	Migratory Bird Treaty Act
MCE	Marin Clean Energy
MDR	Medium-Density Residential
MGD	million gallons per day
MMT	million metric tons

Acronym/Abbreviation	Definition
MS4	Municipal Separate Storm Sewer System
MT	metric ton
MWELO	Model Water Efficient Landscape Ordinance
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCFCWCD	Napa County Flood Control and Water Conservation District
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NOx	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
O_3	ozone
OCP	organochlorine pesticide
PFC	perfluorocarbon
PG&E	Pacific Gas & Electric Company
PGA	peak ground acceleration
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
Proposed Project	Hunter Subdivision Project
PSHA	probabilistic seismic hazard assessment
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Practitioner
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RMS	root mean square
ROG	reactive organic gas
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SA	Site Assessment
SB	Senate Bill
SCS	Sustainable Communities Strategy
SDC	Seismic Design Category
SF_6	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act

Acronym/Abbreviation	Definition
SHFD	St. Helena Fire Department
SHPD	St. Helena Police Department
SHPO	State Historic Preservation Office
SHUSD	St. Helena Unified School District
SO_2	sulfur dioxide
SOx	sulfur oxides
SSMP	Sewer System Management Plan
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	tribal cultural resource
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UVD	Upper Valley Disposal & Recycling
VdB	vibration decibel
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	Waste Discharge Requirement
WQO	Water Quality Order
WRA	Wetland Research Associates
WTP	water treatment plant
WWTP	wastewater treatment plant
ZEV	zero emissions vehicle

EXECUTIVE SUMMARY

This chapter provides a summary of the Draft Environmental Impact Report (EIR) for the proposed Hunter Subdivision Project (Proposed Project). Included in this chapter are areas of known controversy and issues to be resolved, a summary of Proposed Project alternatives, a summary of all Proposed Project impacts and associated mitigation measures, and a statement of the ultimate level of significance after mitigation is applied.

ES.1 DOCUMENT PURPOSE

This EIR was prepared by the City of St. Helena (City), as lead agency, to inform decision makers and the public of the potential significant environmental effects associated with the Proposed Project. This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines; 14 CCR 15000 et seq.) published by the Public Resources Agency of the State of California.

This Draft EIR is a “project” EIR, pursuant to CEQA Guidelines Section 15161. A project EIR examines the environmental impacts of a specific project. Feasible mitigation measures are recommended, when applicable, that could reduce significant environmental impacts to a level of insignificance or avoid significant environmental impacts.

ES.2 PROJECT LOCATION

The 16.9-acre Project site (Assessor’s Parcel Number is 009-030-057) is located in the northeast portion of the City, at the eastern terminus of Adams Street, three blocks east of downtown and State Route 29, and west of the Napa River (see Figure 2-1 in Chapter 2, Project Description). The Project site is generally rectangular with a “panhandle” extension that connects the site to Adams Street west of the panhandle (see Figure 2-2 in Chapter 2, Project Description).

ES.3 PROJECT DESCRIPTION

Project Background

The majority of the Project site was acquired by Dennis Hunter in 1997. Planning efforts were first initiated for development of the Project site in 2005 and an application was submitted to the City in September 2010 that included a request for a Tentative Map to subdivide the property for residential development. A completeness letter for the proposed subdivision was issued by the City on March 28, 2011. Since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project. Nonetheless, this

EIR also evaluates consistency with the City's current "General Plan Update 2040"[1] for informational and consistency purposes.

The Proposed Project would consist of subdividing the 16.9-acre Project site to include 51 lots to accommodate single-family residences, a 3.4-acre parcel that would accommodate 25 attached residential units, a 0.06-acre parcel "A" that would not be developed, and a 0.04-acre parcel "B" for an existing agricultural well site.

The 25 attached units would be income restricted, with 5 units affordable to very low-income families, and 20 to moderate income families. The 51 lots would be developed with single-family market-rate housing units (one dwelling per lot). The Proposed Project applicant has proposed accessory dwelling units on 11 of the single-family lots, designated for above-moderate income groups. The City's Zoning Ordinance (Municipal Code Section 17.116.030) and state law provides for the construction of an accessory dwelling unit on any lot which is zoned for residential use and has an existing single-family residence. The 87 residential units (including single-family, multi-family and accessory dwelling units) would have an average density of 5.1 dwelling units per acre.

Project Objectives

Proposed Project objectives allow for the analysis of reasonable alternatives to the Proposed Project. Reasonable alternatives must be analyzed in accordance with Section 15126.6 of the CEQA Guidelines.

The Proposed Project objectives are as follows:

- Subdivide the site consistent with the City's General Plan and Zoning for the site to accommodate residential development.
- Provide opportunities to develop a variety of housing types, including multi-family, single-family, and accessory dwelling units, affordable to a range of incomes including, very low, low and moderate-income households.
- Provide opportunities to contribute to the provision of workforce and affordable housing consistent with the City's adopted Housing Element and the Regional Housing Needs Assessment (RHNA) approved by the Association of Bay Area Governments (ABAG).
- Minimize traffic-related environmental impacts, such as noise, air quality and greenhouse gases by lowering commute patterns for St. Helena workers by providing more local housing opportunities.

[1] For consistency, this EIR refers to the "General Plan Update 2040" as the "2019 General Plan," reflecting the year it was adopted (as with the "1973 General Plan" and the "1993 General Plan").

- Support alternative transportation by providing a pedestrian and bicycle linkage through St. Helena, eventually connecting the regional Vine Trail from Calistoga to the Vallejo Ferry.
- Exceed the City's green building ordinance (Municipal Code Chapter 15.53) and incorporate sustainable design features including water conservation measures, drought resistant landscaping with low flow watering systems, south and west side tree placement to reduce reliance on air conditioning units, and pre-wiring for photovoltaic systems.
- Implement the General Plan Circulation Element by completing the planned extension of Starr Avenue and the partial planned extension of Adams Street from where Adams Street terminates to connect to the Project site.
- Minimize City water use by continuing the use of an existing on-site water well for irrigation of Proposed Project landscaped areas.

ES.4 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Section 15123(b) (2) of the CEQA Guidelines requires that areas of controversy known to the lead agency must be stated in the executive summary prepared as part of the EIR. Section 15123(b)(3) of the Guidelines requires that an EIR identify issues to be resolved; this includes the choice among alternatives and whether or how to mitigate significant impacts. Issues of interest to the public and public agencies were identified during the 30-day public comment period for the Notice of Preparation that was circulated from March 6, 2018 through April 9, 2018.

Concerns raised from public agencies and the public include impacts to the property from potential flooding, traffic and circulation impacts, increased water demand, and impacts to cultural resources. All of these concerns are addressed in this EIR.

The Notice of Preparation and comment letters received during the Notice of Preparation review period are included in Appendix A of this EIR.

ES.5 EFFECTS FOUND TO BE LESS THAN SIGNIFICANT

Due to certain aspects of the Proposed Project, characteristics, or existing regulatory requirements, the Proposed Project is not anticipated to have significant impacts regarding wildfire. The following provides an overview of why the effects associated with this issue area was found this be less than significant and therefore not further analyzed in further in Chapter 3 of this Draft EIR.

Wildfire

The Proposed Project is not located in a Very High Fire Hazard Severity Zone (VHFHSZ) as designated by the California Department of Forestry and Fire Protection (CAL FIRE). The

Project site is located in a non-VHFHSZ within a Local Responsibility Area, with the closest VHFHSZ in a State Responsibility Area approximately 1 mile to the northeast (CAL FIRE 2008). Between the Project site and the VHFHSZ is the Napa River.

Starting in August 2020 there were a number of wildfires including the LNU Lightning Complex Fire and the Glass Fire that burned large areas of Napa County including a small portion of the Project site. Based on the current CAL FIRE maps the Project site is not located within a State Responsibility Area and is not designated as a VHFHSZ. Emergency access and the potential for the Proposed Project to expose people or structures to loss, injury or death involving wildland fires is addressed in Section 3.8, Hazards and Hazardous Materials. Adequate emergency access is addressed in Section 3.8 and Section 3.14, Transportation. The Project site is flat so fire hazards due to proximity to hilly terrain or landslides due to post-fire conditions would not be a concern. In addition, the Proposed Project does not require installation of infrastructure that could exacerbate fire risk. Because the Project site is not located within a VHFHSZ and future development is not anticipated to have significant impacts due to wildfire this topic is not further analyzed in this document.

ES.6 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table ES-1, Summary of Environmental Impacts and Mitigation Measures, provides a summary of the impact analysis and a summary of environmental impacts resulting from implementation of the Proposed Project pursuant to CEQA Guidelines Section 15123(b)(1). For a more detailed discussion of Proposed Project impacts, please see Chapter 3 of this EIR. Table ES-1 also lists the level of significance of an impact prior to mitigation and lists all applicable mitigation measures identified for significant impacts, as well as providing the level of significance after mitigation.

Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.1 Aesthetics/Visual Resources			
3.1-1: Would the project have a substantial adverse effect on a scenic vista? This would be a less-than-significant impact.	LTS	None required.	LTS
3.1-2: Would the project conflict with applicable regulations governing scenic quality or substantially degrade the existing visual character or quality of public views of the site and its surroundings? This would be a less-than-significant impact.	LTS	None required.	LTS
3.1-3: Would the project potentially create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? This would be a potentially significant impact.	PS	AES-1: To minimize spillover light while ensuring adequate nighttime security, the Project applicant shall prepare lighting design guidelines for the Project to be reviewed and approved by the City as part of the Design Review process. The lighting design guidelines shall include a lighting plan noting fixtures and lumens, and standards such as, lighting is to be shielded and downward focused to reduce glare and spillover light, up cast decorative lighting shall be limited to minimize effects on wildlife and to retain the rural ambience of the area, and the use of mirrored glass shall not be permitted. The lighting guidelines shall conform with Lighting Zone 2 of Title 24, Part 6, of the California Code of Regulations. The guidelines and lighting plan shall be approved as part of the Design Review application.	LTS
3.1-4: Would the proposed project contribute to cumulative changes in the existing visual character or conflict with applicable regulations governing scenic quality? The project's contribution would not be considerable.	LTS	None required.	LTS
3.1-5: Would the proposed project contribute to a cumulative increase in light and glare? The project's contribution would not be considerable with mitigation.	PS	See Mitigation Measure AES-1. Mitigation Measure AES-1 mitigates this impact and no additional mitigation is required.	LTS
3.2 Agriculture and Forestry Resources			
3.2-1: Would the project convert Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? This is a less-than-significant impact.	LTS	None required.	LTS
3.2-2: Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use? This is a less-than-significant impact.	LTS	None required.	LTS
3.2-3: Would the proposed project contribute to cumulative impacts associated with the loss or conversion of existing agricultural resources? The project would result in a less than considerable contribution.	LTS	None required.	LTS

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Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.3 Air Quality			
3.3-1: Would implementation of the proposed project conflict with or obstruct implementation of the applicable air quality plan? This is a less-than-significant impact.	LTS	None required.	LTS
3.3-2: Would implementation of the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard? This is a less-than-significant impact.	LTS	None required.	LTS
3.3-3: Would implementation of the proposed project expose sensitive receptors to substantial pollutant concentrations? This is a less-than-significant impact.	LTS	None required.	LTS
3.3-4: Would the proposed project contribute to cumulative air quality emissions within the existing area? The contribution would not be considerable.	LTS	None required.	LTS
3.4 Biological Resources			
3.4-1: Would the proposed project have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? This would be a significant impact.	PS	BIO-1: A qualified biologist shall conduct a habitat assessment for bats in trees adjacent to the Project site within 2 weeks prior to any Project construction (site clearing, grading). The habitat assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site and 50 feet around these areas. Potential roosting features found during the survey shall be mapped and described in a survey letter report. If roosting bats (individuals or colonies) are detected within the Project site, California Department of Fish and Wildlife shall be notified as soon as possible prior to any construction activity to confirm the bats can be avoided during construction. If a bat roosting or maternity colony cannot be completely avoided, a qualified biologist shall prepare a bat mitigation and monitoring plan for California Department of Fish and Wildlife review and approval, and that plan shall be implemented prior to commencement of construction that could impact the roosting bats or maternity colony. BIO-2: If construction activities are scheduled to occur during the breeding season for birds (February 1 through August 31), the Project applicant or their contractor shall implement the following measures to avoid potential adverse effects to nesting raptors and other nesting birds: • Preconstruction surveys by a biologist of all potential nesting habitats within 500-feet of construction activities, where accessible, shall be conducted by a qualified biologist. Surveys shall occur no more than 14 days prior to the initiation of site disturbance. If construction is stopped for 14 days or more during the breeding season, a new preconstruction nesting bird survey must be conducted before work can be restarted to ensure no new nesting has occurred in the interim. • If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required, following submittal of a survey report letter to the City of St. Helena Planning Department. • If active nests are found during preconstruction surveys, a no-disturbance buffer shall be created around active nests during the breeding season or until it is determined by the biologist that all the young have fledged. The buffers shall be established by the biologist in conjunction with the California Department of Fish and Wildlife. Typical buffers may include 500 feet for raptors and 50 to 250 feet for other bird species based on the location of the nest, the nesting species present, and types of construction activities that may cause potential nest abandonment. The perimeter of the buffer zone shall be fenced or marked with staked flagging. See Mitigation Measure AES-1. Mitigation Measure AES-1, which addresses spillover light that can affect some species mitigates this impact and no additional mitigation is required.	LTS
3.4-2: Would the proposed project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means? This would be a significant impact.	PS	BIO-3: Wetland permits (e.g., 404 Nationwide Permit, 401 Water Quality Certification, and 1602 Streambed Alteration Agreement, respectively) shall be obtained prior to any grading work. Prior to issuance of a grading permit, the Project applicant shall demonstrate authorization from the Army Corp of Engineers and any other regulatory agency to alter the wetland.	LTS

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Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.4-3: Would the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? This would be a potentially significant impact.	PS	See Mitigation Measures AES-1, BIO-1 and BIO-2. Mitigation Measures AES-1, BIO-1 and BIO-2 mitigate this impact and no additional mitigation is required. BIO-1 (requires preconstruction habitat assessment and avoidance of roosting bats), BIO-2 (requires preconstruction surveys and avoidance of nesting birds), and AES-1 addresses spillover light that can affect some species.	LTS
3.4-4: Would the proposed project contribute to cumulative impacts with respect to biological resources? The project's contribution would not be considerable.	LTS	None required.	LTS
3.5 Cultural and Tribal Cultural Resources			
3.5-1: Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5? This would be a significant impact.	PS	CUL-1: The City shall require that an archaeological monitor is present during all ground-disturbing activities with the potential to impact previously identified cultural resources or to encounter unanticipated cultural deposits including tribal cultural resources. The determination for a Native American monitor to be present shall be made by the City, in consultation with the appropriate Native American tribe prior to the initiation of ground disturbing activities. In addition, prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. Areas observed to have potential to contain yet-identified subsurface cultural material or deposits are located throughout the Project site, but primarily would be in the western portion of the site where the existing vineyard is located. It is anticipated resources would not be present at depths of more than 10 feet below the surface. Archaeological and Native American monitoring may be adjusted at the recommendation of the qualified archaeological principal investigator, meeting the Secretary of the Interior Professional Qualifications for Archaeology, and in consultation with the City, based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material. The archaeological and tribal monitors shall be provided a copy of technical reports prepared for the project and pertinent appendices to inform their monitoring efforts. The archaeological and tribal monitors shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until the qualified archaeological principal investigator, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the Tribe. Should it be determined by the Tribe and the archeologist, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. As approved by the City in consultation with the Tribe, this buffer may be adjusted by the Tribe and the archaeological principal investigator to a distance that maintains a protective perimeter around the unanticipated resource, while still allowing for construction to continue in the surrounding area.	LTS
3.5-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? This would be a potentially significant impact.	PS	See Mitigation Measure CUL-1. Mitigation Measure CUL-1 mitigates this impact and no additional mitigation is required.	LTS
3.5-3: Would the project disturb human remains, including those interred outside of formal cemeteries? This would be a less-than-significant impact.	PS	CUL-2: In the event any human remains are unearthed during site disturbing activities, Section 7050.5(b) of the California Health and Safety Code and Section 15064.5(e) of the CEQA Guidelines specifies protocols to follow in the event human remains are discovered. The Code mandates stopping work within 100 feet of the find and contacting the County Coroner to determine the origin of the remains. If the remains are determined to be Native American the Coroner shall contact the Native American Heritage Commission within 24 hours to request that the Commission determine the person or persons it believes to be descended from the deceased Native American. The most likely descendant shall be provided with the opportunity to make recommendations regarding the means of treating or disposing of the remains with appropriate dignity. Project-related ground disturbance in the vicinity of the find shall not resume until all statutory requirements have been met and evidence of completion has been submitted to the City, in consultation with the Tribe.	LTS
3.5-4: Would the proposed project cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or a resource determined	PS	See Mitigation Measure CUL-1. Mitigation Measure CUL-1 mitigates this impact and no additional mitigation is required.	LTS

Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
by the lead agency to be significant? This impact is considered potentially significant.			
3.5-5: Would the proposed project contribute to cumulative impacts to cultural resources, including historical and archeological resources as defined in CEQA Guidelines Section 15064.5 and human remains? This impact is considered potentially significant.	PS	See Mitigation Measure CUL-1. Mitigation Measure CUL-1 mitigates this impact and no additional mitigation is required.	LTS
3.5-6: Would the proposed project contribute to cumulative impacts to tribal cultural resources, currently listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or a resource determined by the lead agency to be significant? This impact is considered potentially significant.	PS	See Mitigation Measure CUL-1. Mitigation Measure CUL-1 mitigates this impact and no additional mitigation is required.	LTS
3.6 Geology and Soils			
3.6-1: Would implementation of the proposed project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or liquefaction? This would be a potentially significant impact.	PS	GEO-1: Prior to the issuance of any site-specific grading or building permits, the Project applicant shall have a design-level geotechnical report prepared and submitted to the City of St. Helena Building Department for review and approval in accordance with adopted City standards. The structural designs shall adhere to the currently adopted version of the California Building Code. The report shall identify specific site preparation methods, grading practices, foundation designs, and other recommendations appropriate for minimizing damage from weak soils, expansive soils, differential settlement, and seismic hazards, including liquefaction. Specifically, the following requirements for the geotechnical and soils report shall be met: • Analysis presented in the geotechnical report shall conduct a detailed evaluation of liquefaction in accordance with California Department of Conservation Special Publication 117A: *Guidelines for Evaluating and Mitigating Seismic Hazards in California*. • Additional subsurface soil borings shall be completed as necessary to represent the full range of site conditions, including the southern portion of the parcel mapped as alluvial fan. • Analysis presented in the geotechnical report shall include recommendations for building foundations and improvements, including sidewalks, parking lots, and subsurface utilities, that take into consideration the potential effects of settlement, collapse, and expansive or corrosive soils. This includes the recommendation to over excavate to an average depth of 4.5 feet (and up to 10 feet in the location of the former pond) due to anticipated settlement. • All design criteria and specifications set forth in the design-level geotechnical report shall be implemented as a condition of project approval. This report shall be completed as a condition of approval of the final tentative map.	LTS
3.6-2: Would implementation of the proposed project occur on weak, compressible, and/or expansive soils that could result in adverse impacts on habitable structures? This would be a less-than-significant impact.	PS	See Mitigation Measure GEO-1. Mitigation Measure GEO-1 mitigates this impact and no additional mitigation is required.	LTS
3.6-3: Would implementation of the proposed project directly or indirectly destroy a unique paleontological resource or site? This would be a potentially significant impact.	PS	GEO-2: In the event that known or suspected paleontological resources (e.g., fossils) are unearthed during grading or trenching, the area of discovery shall be roped off by the construction contractor to include a 50-foot radius buffer and remain off-limits until cleared by a qualified paleontologist. The Project applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines, who shall be tasked with assessing the significance of the fossil find, including documenting the nature, location, and taxa of the find. The qualified paleontologist shall use his/her professional judgement as to the significance of the find, and whether the find should be preserved in a museum repository. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. Documentation of the fossil find, including appropriate salvage and recovery of fossil specimens and of transfer of to an appropriate repository (e.g., University of California Museum of Paleontology) shall be submitted to the City of St. Helena as evidence of compliance with this mitigation measure.	LTS

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Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.6-4: Would the proposed project contribute to cumulative impacts related to geologic or seismic hazards? This would be a less than considerable contribution.	LTS	None required.	LTS
3.7 Greenhouse Gas Emissions			
3.7-1: Would implementation of the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? This would be a less-than-significant impact.	LTS	None required.	LTS
3.7-2: Would implementation of the proposed project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? This would be a less-than-significant impact.	LTS	None required.	LTS
3.7-3: Would the proposed project contribute to cumulative GHG emissions within the region? The project's contribution would not be considerable.	LTS	None required.	LTS
3.8 Hazards and Hazardous Materials			
3.8-1: Would implementation of the proposed project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? This would be a less-than-significant impact.	LTS	None required	LTS
3.8-2: Would implementation of the proposed project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? This would be a potentially significant impact.	PS	HAZ-1: As a condition of approval for construction and grading permits for the Project site, the Project applicant shall the ensure following subsurface soils testing and follow-up analysis shall be performed prior to obtaining a grading permit: • A soils testing work plan shall be developed in accordance with DTSC's Interim Guidance for Sampling Agricultural Properties (DTSC 2008) by an appropriately licensed individual (i.e., professional geologist, environmental engineer, or similar qualification) for the portions of the Project site historically used for agriculture. Special consideration shall be given to targeting site soils that are representative of historic agricultural use, and to avoid sampling recent fill material placed during levee construction. Prior to carrying out soils testing, the work plan shall be submitted to the Napa County Division of Environmental Health (as the Certified Unified Program Agency for all cities and areas of Napa County) and the City of St. Helena for review and approval. • The number of soil samples, sampling methods, compounds tested, background samples (if applicable), and laboratory analyses shall be completed in accordance with DTSC's Interim Guidance. Should analytical results exceed naturally occurring concentrations or applicable CHHSLs, the health risks of such a condition shall be evaluated in human health risk assessment as described in DTSC standards and guidance (e.g., preliminary endangerment assessment guidance manual). • The risk assessment shall describe measures that must be implemented to ensure potential health risks to construction workers, site residents, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than one in one million for carcinogens and a cumulative hazard index of 1 for non-carcinogens, or as required by the Napa County Division of Environmental Health acting as the Certified Unified Program Agency and/or DTSC oversight. In the event human health risk assessment shows elevated chemical concentrations pose a risk to human health or the environment, the risks shall be eliminated or substantially reduced by removal (e.g., excavation of soils and off-site disposal) or remediation of contaminated soils, and/or implementation of institutional controls and engineering controls (IC/EC). IC/EC may include use of a construction risk management plan, use of hardscape to cap problem areas, importation of clean soil in landscaped	LTS

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Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		area to eliminate exposure pathways, and/or deed restrictions. If IC/EC are implemented, an Operations and Maintenance Program shall be prepared and implemented to ensure that the measures adopted are maintained throughout the life of the Project. The soil testing report, and if applicable, the human health risk assessment and Operations and Maintenance Program, shall be subject to review and approval by the City of St. Helena Department of Public Works, the Napa County Division of Environmental Health and/or other regulatory oversight agencies.	
3.8-3: Would implementation of the proposed project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? This would be a less-than-significant impact.	LTS	None required.	LTS
3.8-4: Would implementation of the proposed project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? This would be a less-than-significant impact.	LTS	None required.	LTS
3.8-5: Would implementation of the proposed project contribute to a cumulative increase in the potential exposure of people to sites where soil contamination could be present from past or current uses, or to hazards associated with the use and transport of hazardous materials? The project's contribution would be less than considerable.	LTS	None required.	LTS
3.9 Hydrology and Water Quality			
3.9-1: Would implementation of the proposed project violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality? This would be a less-than-significant impact.	LTS	None required.	LTS
3.9-2: Would implementation of the proposed project deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? This would be a less-than-significant impact.	LTS	None required.	LTS
3.9-3: Would implementation of the proposed project substantially alter the existing drainage pattern of the site or area through the addition of impervious surfaces resulting in erosion or siltation on- or off-site; increasing the rate or amount of surface runoff resulting in flooding on- or off-site; contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or	LTS	None required.	LTS

Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
provide polluted runoff; or impede or redirect flood flows? This would be a less-than-significant impact.			
3.9-4: Would implementation of the proposed project release pollutants during flooding? This would be a less-than-significant impact.	LTS	None required.	LTS
3.9-5: Would implementation of the proposed project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? This would be a less-than-significant impact.	LTS	None required.	LTS
3.10 Land Use			
3.10-1: Would implementation of the proposed project conflict with the City's 1993 General Plan policies or other regulations adopted for the purpose of avoiding or mitigating an environmental effect? This would be a less-than-significant impact.	LTS	None required.	LTS
3.11 Noise and Vibration			
3.11-1: Would short-term construction noise levels cause a substantial temporary increase in ambient noise levels? This would be a potentially significant impact.	PS	NOI-1: The Project applicant or its contractors shall implement the following for onsite noise control and sound abatement means that, in aggregate, would yield sufficient construction noise reduction during the site preparation, grading/excavation, and building construction phases of the Project to ensure compliance with the FTA-based guidance standard of 90 dBA hourly Leq at or beyond the property lines of the nearest residences, as noted. *Administrative Controls* – At all times during site preparation and construction: • Comply with Chapter 8.24 of the Municipal Code with respect to allowable construction periods, • Minimize idling time of onsite equipment, and • Either locate onsite stationary construction equipment (such as generators or air compressors) as far from adjacent residential property boundaries as is feasible, or place this equipment inside an approved noise-attenuating casing (e.g., sound-attenuated air intakes and heat vents, exhaust mufflers, etc.), or place this equipment indoors. *Engineering Controls* – All mobile and stationary construction equipment employing an internal combustion engine shall be equipped with suitable exhaust and intake silencers which are in good working order; and *Install Sound Abatement* – During site preparation and construction which involves the operation of more than two pieces of heavy equipment (dozer, backhoe, front-end loader, crane, tractor, etc.) for at least one hour and when operating within 25 feet of the exterior of a residence (either offsite or onsite), do the following: • Erect a temporary barrier (i.e., plywood sheet) or install sound blankets (or comparable temporary solid barriers) on the Project's construction fencing, or • Locate sound path intervening containers or trailers onsite to block direct line-of-sight between residences and the operating heavy equipment.	LTS
3.11-2: Would existing residential areas be exposed to vibration peak-particle velocities greater than 0.2-inch per second or vibration levels greater than 80 VdB due to project construction? This would be a less-than-significant impact.	LTS	None required.	LTS

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Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.11-3: Would on-site operation noise from the proposed residences result in noise exposure levels that would impact adjacent residences? The impact would be less than significant.	LTS	None required.	LTS
3.11-4: Would the proposed project vehicle trips result in off-site roadway noise level increases that could impact noise sensitive land uses located along such roadways? The impact would be less than significant.	LTS	None required.	LTS
3.11-5: Would the proposed project, in addition to cumulative development in the City, increase traffic noise that exceeds the City's noise standards? The project's contribution would not be considerable.	LTS	None required.	LTS
3.12 Public Services and Recreation			
3.12-1: Would the proposed project increase demand for public services requiring the need to construct new facilities, or expand existing facilities, the construction of which could cause significant environmental impacts? This would be a less-than-significant impact.	LTS	None required.	LTS
3.12-2: Would the proposed project increase the use of existing neighborhood parks or other recreational services such that a substantial physical deterioration of the facility would occur, or require the construction or expansion of facilities that could have a physical adverse effect on the environment? This would be a less-than-significant impact.	LTS	None required.	LTS
3.12-3: Would the proposed project contribute to a cumulative increase in demand for public services, schools, and recreation facilities? The project's contribution would not be considerable.	LTS	None required.	LTS
3.13 Utilities			
3.13-1: Would the proposed project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities? This is a less-than-significant impact.	LTS	None required.	LTS

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Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.13-2: Would the proposed project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? This is a less-than-significant impact.	LTS	None required.	LTS
3.13-3: Would the proposed project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? This is a less-than-significant impact.	LTS	None required.	LTS
3.13-4: Would the proposed project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? This is a less-than-significant impact.	LTS	None required.	LTS
3.13-5: Would the proposed project comply with federal, state, and local statutes and regulations related to solid waste? This is a less-than-significant impact.	LTS	None required.	LTS
3.13-6: Would the proposed project contribute to an increase in demand for water supply, wastewater treatment, stormwater or solid waste? The project's contribution would not be considerable.	LTS	None required.	LTS
3.14 Transportation and Traffic			
3.14-1: Would the proposed project conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? This would be a less-than-significant impact.	LTS	None required.	LTS
3.14-2: Would the proposed project conflict or be inconsistent with CEQA Guidelines section 15064.3(b)? This is a significant impact.	SU	None available.	SU
3.14-3: Would the proposed project increase hazards due to a geometric design feature or incompatible use? This is a less-than-significant impact.	LTS	None required.	LTS

Table ES-1
Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.14-4: Would the proposed project result in inadequate emergency access. This is a less-than-significant impact.	LTS	None required.	LTS
3.14-5: Under Cumulative conditions, would the proposed project conflict or be inconsistent with CEQA Guidelines section 15064.3(b)? This is considered a significant impact.	SU	None available.	SU
3.15 Energy			
3.15-1: Would implementation of the proposed project result in wasteful, inefficient or unnecessary consumption of energy resources during construction or operation? This would be a less-than-significant impact.	LTS	None required.	LTS
3.15-2: Would implementation of the proposed project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? This would be a less-than-significant impact.	LTS	None required.	LTS
3.15-3: Would the proposed project contribute to an increase in wasteful, inefficient or unnecessary consumption of energy resources during construction or operation? The project's contribution would not be considerable.	LTS	None required.	LTS

PS= Potentially Significant SU = Significant and Unavoidable LTS = Less than Significant NI= No Impact

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ES.7 SUMMARY OF PROJECT ALTERNATIVES

Section 15126.6 of the CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to a project should occur. As stated in this section of the CEQA Guidelines, alternatives must focus on those that are reasonably feasible and that attain most of the basic objectives of the project. Each alternative should be capable of avoiding or substantially lessening any significant effects of that project. The rationale for selecting the alternatives to be evaluated and a discussion of the No Project Alternative are also required, per Section 15126.6.

Alternatives Evaluated

This EIR includes an evaluation of the following alternatives:

- Alternative 1 – No Project/No Development
- Alternative 2 – No Project/General Plan
- Alternative 3 – Park/Open Space Preserve
- Alternative 4 – Increased Density/Affordable Housing

Alternative 1 – No Project/No Development

The No Project Alternative assumes that the Proposed Project would not be developed and the current undeveloped Project site would remain and not be altered.

Given the development assumptions of the 1975 General Plan, the 1993 General Plan and the 2019 General Plan, all of which assumed residential development on the project site, it is unlikely that this site would remain undeveloped. The Project site is designated as Medium Density Residential (MDR) in both the 1993 General Plan and the 2019 General Plan. According to the 1993 General Plan, the Medium Density Residential (MDR) designation provides for single-family detached and attached homes, secondary residential units, public and semi-public uses, and similar and compatible uses. Although the No Project Alternative would not meet the objectives identified for the Proposed Project and those development assumptions in the General Plans, CEQA requires an alternative that forgoes the project be analyzed.

Alternative 2 – No Project/General Plan

Under this alternative, it is assumed the Project would be developed consistent with the underlying MDR land use designation and MR zoning which allows development of the Project site with residential uses up to a maximum density of 12 dwelling units/acre (du/ac) under the

1993 General Plan MDR designation which was revised to 16 du/ac under the 2019 General Plan consistent with the MR zoning, which permits a maximum density of 16 du/ac.

For the purposes of this alternative a density of 9 du/ac was assumed for a total of 152 single-family residential units. Based on the number of units this alternative would result in a population of 372 residents, an increase of 159 residents as compared to the Project.

It is assumed Starr Avenue and Adams Street would both be extended to connect to the Project site and the street and lot layout would be very similar to the Project with the exception of the 3.4-acre portion of the site currently designated for multifamily units (Lot 52). This portion of the Project site would be configured to accommodate single-family residences.

Alternative 3 – Park/Open Space Preserve

This alternative includes a 1-acre park that would preserve a majority of the on-site wetlands. Although three lots would need to be removed to accommodate the 1-acre park, this alternative would include approximately the same number of units as the Proposed Project, including the 25 affordable housing units. It is assumed up to 11 Accessory Dwelling units could still be constructed on the larger lots.

Alternative 4 – Increased Density/Affordable Housing

The Increased Density/Affordable Housing Alternative includes the approximately 1-acre park to preserve a majority of the on-site seasonal wetlands with the remaining approximately 16-acres designated for up to 180 affordable housing units, assuming a density of 11.3 dwelling units per acre (du/ac) under the existing Medium Density Residential (MDR) land use designation (current zoning allows for a maximum density of 16.0 du/ac). The units would be attached housing (duplex or triplex) and would be 100% affordable. It is assumed buildings would be no taller than 30-feet, consistent with the underlying MR zoning.

Environmentally Superior Alternative

Table ES-2, Comparison of Impacts of the Alternatives, provides a summary of the alternatives impact analysis considered in the EIR and identifies the areas of potential environmental effects per CEQA, and ranks each alternative as better, the same, or worse than the Proposed Project with respect to each issue area.

Table ES-2
Comparison of Impacts of Project Alternatives

Environmental Issue Area	Proposed Project	Alternative 1 No Project/ No Development	Alternative 2 No Project/ General Plan	Alternative 3 Park/Open Space Preserve	Alternative 4 Increased Density/ Affordable Housing
Aesthetics/Visual Resources	LTS/MM	▼	—	—	—
Agriculture and Forestry Resources	LTS	▼	—	—	—
Air Quality	LTS	▼	—	Δ	Δ
Biological Resources	LTS/MM	▼	▼	▼	▼
Cultural Resources	LTS/MM	▼	—	—	—
Geology and Soils	LTS/MM	▼	—	—	—
Greenhouse Gas Emissions	LTS	▼	—	Δ	Δ
Hazards and Hazardous Materials	LTS	▼	—	—	—
Hydrology and Water Quality	LTS	▼	—	—	—
Land Use	LTS	▼	—	—	—
Noise and Vibration	LTS/MM	▼	—	Δ	Δ
Public Services and Recreation	LS	▼	Δ	—	Δ
Utilities	LTS	▼	—	Δ	Δ
Traffic and Circulation	SU	▼	—	▼	▼
Energy	LTS	▼	—	Δ	Δ

Δ Alternative is likely to result an increase in severity of the impact when compared to Proposed Project.
— Alternative is likely to result in similar impacts when compared to Proposed Project.
▼ Alternative is likely to result in reduced impacts when compared to Proposed Project.
LTS/MM = Less than significant impact with mitigation, LTS = Less than significant impact, SU=Significant and Unavoidable

As indicated in Table ES-2, Alternative 1, the No Project/No Development Alternative would result in the fewest environmental impacts, and subsequently would be considered the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Of the alternatives evaluated above, Alternative 2, the Park Preserve alternative is the environmentally superior alternative.

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CHAPTER 1
INTRODUCTION AND SCOPE OF THE EIR

1.0 PURPOSE AND INTENDED USE OF THIS EIR

The City of St. Helena (City) has prepared this Draft Environmental Impact Report (EIR) to inform the general public, the local community, responsible agencies, trustee agencies, and other interested public agencies, and the City's decision-making bodies (City Council) regarding the potential significant environmental effects resulting from implementation of the proposed Hunter Subdivision Project (Proposed Project), as well as possible measures to mitigate those potential significant effects including alternatives to the Proposed Project. This Draft EIR was prepared in compliance with the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.), the CEQA Guidelines (14 CCR 15000 et seq.), and the City's procedures for implementing CEQA. This Draft EIR is a "project" EIR, pursuant to CEQA Guidelines Section 15161. A project EIR examines the environmental impacts of a specific project.

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to a proposed project that could reduce or avoid adverse environmental impacts. As the CEQA lead agency for this Proposed Project, the City is required to consider the information in the EIR along with any other available information in deciding whether to approve the Proposed Project entitlements requested. The basic requirements for an EIR include providing information that establishes the environmental setting (or project baseline), and identifying environmental impacts, mitigation measures, project alternatives, growth inducing impacts, and cumulative impacts. In a practical sense, an EIR functions as a method of fact-finding, allowing an applicant, the public, other public agencies, and agency staff an opportunity to collectively review and evaluate baseline conditions and project impacts through a process of full disclosure. Additionally, this EIR provides the primary source of environmental information for the lead agency and also those responsible agencies to consider when exercising any permitting authority or approval power directly related to implementation of this Proposed Project. It is not the intent of an EIR to recommend either approval or denial of a project.

1.1 USE OF PREVIOUSLY PREPARED ENVIRONMENTAL DOCUMENTATION

A Proposed Project application to develop the site was submitted to the City in 2010, and the City retained an environmental consultant in 2011 to prepare an EIR for the Proposed Project. The environmental review process was completed, and in September 2013, the City's Planning Commission reviewed comments received on the Draft EIR, but no action was taken by the Commission and the item was continued. Revisions were subsequently made to the Proposed Project that required the Draft EIR to be updated.

Updates to the Draft EIR were completed in 2017, but the City opted to not release the Draft EIR for public review due to problems with that document that required additional work. Ultimately, the City released a Request for Proposals for the preparation of this (2021) EIR.

The 2012 and 2017 Draft EIRs were reviewed in preparation of this EIR.

In May 2019, the City adopted the "General Plan Update 2040."[1] However, since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project. Nonetheless, this EIR will also evaluate consistency with the City's adopted 2019 General Plan for informational and consistency purposes.

CEQA Guidelines Section 15150 allows for incorporation by reference of "all or portions of another document which is a matter of public record or is generally available to the public." Incorporation by reference is used principally as a means of reducing the size of EIRs. This Draft EIR relies in part on data, environmental evaluations, and mitigation measures from the prior Draft EIRs, and other components of environmental documents and plans prepared by the City for areas within the Proposed Project vicinity. These documents are listed here and used as source documents for this Draft EIR. All documents are available for public review during normal business hours (Monday through Friday, 8:30 a.m. to 5:00 p.m.) at the City of St. Helena Planning Division, 1480 Main Street, St. Helena, California 94574, and on the City's website at http://www.ci.st-helena.ca.us/planning/page/ceqa-document-center.

- Hunter Subdivision Project Revised EIR, October 2017
- City of St. Helena 1993 General Plan, adopted September 28, 1993
- City of St. Helena General Plan Update 2040, adopted June 2019
- St. Helena Municipal Code, updated through October 2020

1.2 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

Lead Agency

In accordance with CEQA Guidelines Sections 15050 and 15367, the City of St. Helena has been designated the "lead agency," which is defined as the "public agency which has the principal responsibility for carrying out or disapproving a project." The lead agency is also responsible for determining the scope of the environmental analysis, preparing the EIR, and responding to comments received on the Draft EIR. Prior to making a decision to approve a

[1] For consistency, the "General Plan Update 2040" document is referred to in this EIR as the "2019 General Plan".

project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City.

Responsible Agencies

Responsible agencies are state and local public agencies, other than the lead agency, that have some authority to carry out or approve a project or that are required to approve a portion of the project or approve a permit for which a lead agency is preparing or has prepared an EIR or Initial Study/Negative Declaration (CEQA Guidelines Section 15813). The following agencies would potentially act as responsible agencies for the purposes of this Proposed Project:

- **San Francisco Regional Water Quality Board**. Ensures compliance with the City's National Pollutant Discharge Elimination System Permit for any stormwater discharge associated with construction activity.
- **Bay Area Air Quality Management District.** Oversees air quality and has the authority to require mitigation fees.

Trustee Agencies

Trustee agencies are designated public agencies with legal jurisdiction over natural resources that are held in trust for the people of California and that would be affected by a project, whether or not the agencies have authority to approve or implement the project (CEQA Guidelines Section15386). The following agency was identified as a trustee agency with potential jurisdiction over the Proposed Project:

- California Department of Fish and Wildlife

1.3 EIR PROCESS

Notice of Preparation

In accordance with CEQA Guidelines Section 15082, a Notice of Preparation (NOP) was circulated for public and agency review from March 6, 2018 through April 9, 2018 (included as Appendix A). The purpose of the NOP is to provide notification that an EIR for the Proposed Project was being prepared and to solicit guidance on the scope and content of the document. A summary of the comments received on the NOP is included in the Executive Summary, as well as in the introduction of each technical section.

Pursuant to CEQA Guidelines Section 15082, the lead agency held a public scoping meeting on March 12, 2018. Responsible agencies and members of the public were invited to attend and provide input on the scope of the EIR. Comments from agencies and the public in response to

the NOP are provided in Appendix A. General concerns and issues raised in response to the NOP are summarized in the Executive Summary and addressed in this Draft EIR.

Draft EIR and Public Review

This Draft EIR is being circulated for public review and comment for a period of 45 days. During this period, the general public, organizations, and public agencies can submit comments to the lead agency on the Draft EIR's accuracy and completeness. Release of this Draft EIR marks the beginning of a 45-day public review period pursuant to CEQA Guidelines Section 15105. The 45-day public review period for the Draft EIR will be from September 23, 2021 through November 8, 2021. The public can review the Draft EIR at the following address during normal business hours (Monday through Friday, 8:30 a.m. to 5:00 p.m.) or on the City's website at www.cityofsthelena.org.

City of St. Helena
Planning Division
1572 Railroad Avenue
St. Helena, California 94574

The City encourages all comments on the Draft EIR be submitted in writing. All comments or questions regarding the Draft EIR should be addressed to:

Maya DeRosa, AICP, Planning and Building Director
City of St. Helena Planning Division
1572 Railroad Avenue
St. Helena, California 94574
(707) 967-2783
mderosa@cityofsthelena.org

Final EIR and EIR Certification

Upon completion of the Draft EIR public review period, a Final EIR will be prepared that will include written comments on the Draft EIR received during the public review period and the City's responses to those comments. The Final EIR will also include the Mitigation Monitoring Program prepared in accordance with Section 21081.6 of the California Public Resources Code. The Final EIR will address any revisions to the Draft EIR made in response to agency or public comments. The Draft EIR and Final EIR together will comprise the EIR for the Proposed Project. Before the City can review the Proposed Project for approval, it must first certify that the EIR has been completed in compliance with CEQA, that the City Council has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City. The City Council would also be required to adopt Findings of Fact and a Statement of

Overriding Considerations (if any significant and unavoidable impacts are identified). If no significant and unavoidable impacts (assuming the City Council finds all proposed mitigation measures to be feasible), are identified the City Council would not be required to adopt a Statement of Overriding Considerations if it approves the Proposed Project (see also Public Resources Code Section 21081).

EIR Adequacy

The level of detail contained throughout this EIR is consistent with Section 15151 of the CEQA Guidelines, which states the following:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

1.4 SCOPE OF THE DRAFT EIR

This Draft EIR has been prepared in compliance with CEQA (California Public Resources Code Section 21000 et seq.) and the procedures for implementation of CEQA set forth in the CEQA Guidelines (14 CCR 15000 et seq.).

According to CEQA Guidelines Section 15161, an EIR should focus primarily on the changes in the environment that would result from implementation of a proposed project. This EIR evaluates the potential environmental impacts that may occur from construction and operation of the Proposed Project, including direct, indirect, cumulative, and growth-inducing impacts. Based on a review of the Proposed Project and comments received during the NOP public review period, the City determined that an EIR should be prepared that addresses the following technical issue areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources

- Cultural and Tribal Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise and Vibration
- Public Services/Recreation
- Public Utilities
- Transportation and Circulation
- Energy

This EIR evaluates the direct impacts, reasonably foreseeable indirect impacts, and cumulative impacts resulting from planning, construction, and operation of the Proposed Project using the most current information available and in accordance with the provisions set forth in CEQA and the CEQA Guidelines. In addition, the EIR recommends potentially feasible mitigation measures, where possible, and Proposed Project alternatives that would reduce or eliminate significant adverse environmental effects.

The alternatives chapter of the EIR (Chapter 5, Project Alternatives) was prepared in accordance with Section 15126.6 of the CEQA Guidelines. CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environmental impacts that would otherwise occur. Proposed Project alternatives are not required, if no significant environmental impacts would occur.

The EIR evaluates the following alternatives to the Proposed Project:

Alternative 1: No Project/No Build Alternative. This alternative assumes no development would occur, and the site would remain in its current undeveloped condition.

Alternative 2: No Project/General Plan Alternative. This alternative assumes development would occur consistent with the General Plan land use designation and zoning.

Alternative 3: Park Preserve Alternative. This alternative includes a 1-acre park that would preserve a majority of the on-site wetlands and would include the same number of units as the Proposed Project, including the affordable housing units and accessory dwelling units.

Alternative 4: Increased Density/Affordable Housing Alternative. This alternative includes a 1-acre park along with up to 180 affordable housing units.

1.5 ORGANIZATION OF THE DRAFT EIR

Chapter 2, Executive Summary—Summarizes the elements of the Proposed Project and the environmental impacts that could result from implementation of the Proposed Project and provides a table that lists impacts, describes proposed mitigation measures, and indicates the level of significance of impacts before and after mitigation.

Chapter 1, Introduction and Scope of the Draft EIR—Provides an introduction and overview of the EIR process and describes the intended use of the EIR and the review process.

Chapter 2, Project Description—Provides a detailed description of the Proposed Project, including its location, background information, Project objectives, and technical characteristics.

Chapter 3, Introduction to the Analysis—Describes the baseline environmental setting and provides an assessment of potential Proposed Project impacts for each technical issue area presented. Each section is divided into four sub-sections: Introduction, Environmental Setting, Regulatory Background, and Impacts and Mitigation Measures (Proposed Project–specific and cumulative).

Chapter 4, CEQA Considerations—Provides information required by CEQA regarding impacts that would result from the Proposed Project, including a summary of cumulative impacts, secondary impacts including potential impacts resulting from growth inducement, and significant irreversible changes to the environment.

Chapter 5, Project Alternatives—Describes and compares the Proposed Project alternatives to the Proposed Project.

Chapter 6, EIR Preparers—Lists report authors who provided technical assistance in the preparation and review of the EIR.

Appendices—Includes various documents and data that support the analysis presented in the Draft EIR.

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CHAPTER 2
PROJECT DESCRIPTION

2.0 INTRODUCTION

Ben and Kelly Vanzutphen (Project applicants) have requested approval of a Tentative Subdivision Map. This proposed subdivision, which is the only discretionary action being considered by the City of St. Helena (City) at this time, would form the basis for the proposed Hunter Subdivision Project (Proposed Project), which is the "project" examined in this Environmental Impact Report (EIR). Development of the Proposed Project would require the approval of the Tentative Subdivision Map and several subsequent discretionary approvals, as outlined under Section 2.6 later in this chapter.

The Proposed Project's reasonably foreseeable and potentially significant adverse environmental effects are evaluated in this EIR.

Consistent with California Environmental Quality Act (CEQA) Guidelines Section 15124, this chapter includes: the location and boundaries of the Proposed Project, as shown on a project location map and on a regional map; a statement of the objectives sought by the Proposed Project; a general description of the Proposed Project's environmental characteristics, supporting public facilities; and a statement briefly describing the intended uses of the EIR, including a list of public agencies that are expected to use the EIR in their decision making, and a list of permits and approvals required to implement the Proposed Project.

Information has been provided by the Proposed Project applicant and City planning staff. The following project description serves as the basis for the environmental analysis contained in this EIR. The City will serve as the lead agency with final authority to certify the EIR and approve the Proposed Project (both the Tentative Subdivision Map and subsequent approvals).

2.1 PROJECT SITE

Location and Surrounding Land Uses

The 16.9-acre Project site (Assessor's Parcel Number is 009-030-057) is located in the northeast portion of the City, at the eastern terminus of Adams Street, three blocks east of downtown and State Route 29 (SR 29), and west of the Napa River, as shown in Figure 2-1, Regional Location.

The Project site is generally rectangular with a "panhandle" extension that connects the site to Adams Street west of the panhandle, as shown in Figure on Figure 2-2, Project Location. Adjacent land uses include single-family and multi-family residential development to the south, including the Vineyard Valley Mobile Home Park and the Hunt's Grove Apartments. Office uses

are located immediately adjacent to the site's most western edge at the terminus of Adams Street. Undeveloped land currently under cultivation is located to the north and northwest. A single-family residence along with a barn and accessory dwelling unit is currently (May 2021) under construction to the west/north of the Project site. A gravel maintenance road used by the public as an informal trail borders the site along the north/northwest boundary along with a separate public trail located on the north/northwest side of the maintenance road (referred to as the "maintenance road/public trail"), and a City storm water detention basin borders the site to the south/southeast. A drainage ditch is located along the northern edge of the property. Figure 2-3 depicts existing and adjacent land uses.

The open space located north and east of the site is part of the St. Helena Comprehensive Flood Protection Project (Flood Protection Project). The Napa River flows from northwest to southeast approximately 500 feet north/northeast of the Proposed Project boundary.

Existing Uses and On-Site Characteristics

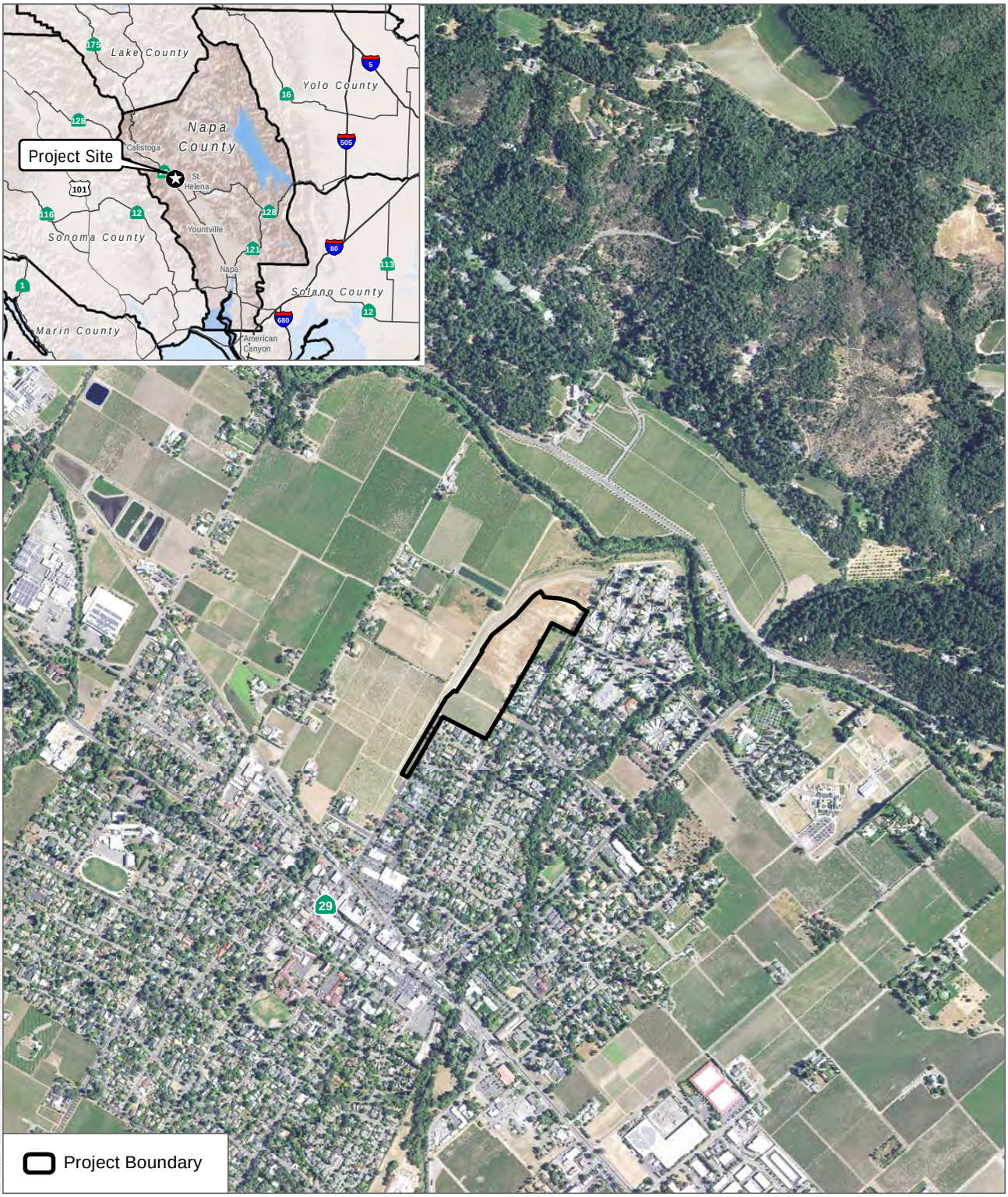
Approximately 40% (6 acres) in the southwestern portion of the Project site is under cultivation with a vineyard. Approximately one acre of vineyard is located in the western '"panhandle" portion of the Project site. The remainder of the site is undeveloped. An existing agricultural well is located near the southeastern end of the Project site, adjacent to proposed lot 19 of the Tentative Subdivision Map, shown as Parcel B on the proposed Tentative Map (see Figure 2-4).

Based on the Proposed Project's grading plan, the elevation across the Project site as developed would range from approximately 230 feet above mean sea level (amsl) on its southern edge to approximately 212 feet amsl on its northern edge. The portion of the site planned for the extension of Adams Street ranges from 243 feet amsl to 230 feet amsl.

An existing 10-foot wide public water line easement containing an active 12-inch water line bisects the north/northeast portion of the site. This easement is proposed to be abandoned as part of the proposed Tentative Subdivision Map and the water line relocated.

The existing gravel maintenance road/public trail that starts at the end of Adams Street and borders the Project site along the north/northwest is a popular walking trail for City residents.

Several small Valley Oak trees are present along the eastern boundary of the site along Del Rio Court that would not be removed as part of the Proposed Project. In addition, there is a drainage ditch located in this area and also along a portion of the eastern Proposed Project boundary. The Proposed Project would not impact these existing ditches.



SOURCE: Napa County 2015, USDA 2016

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0 600 1,200 Feet

FIGURE 2-1

Regional Location

Hunter Subdivision Project

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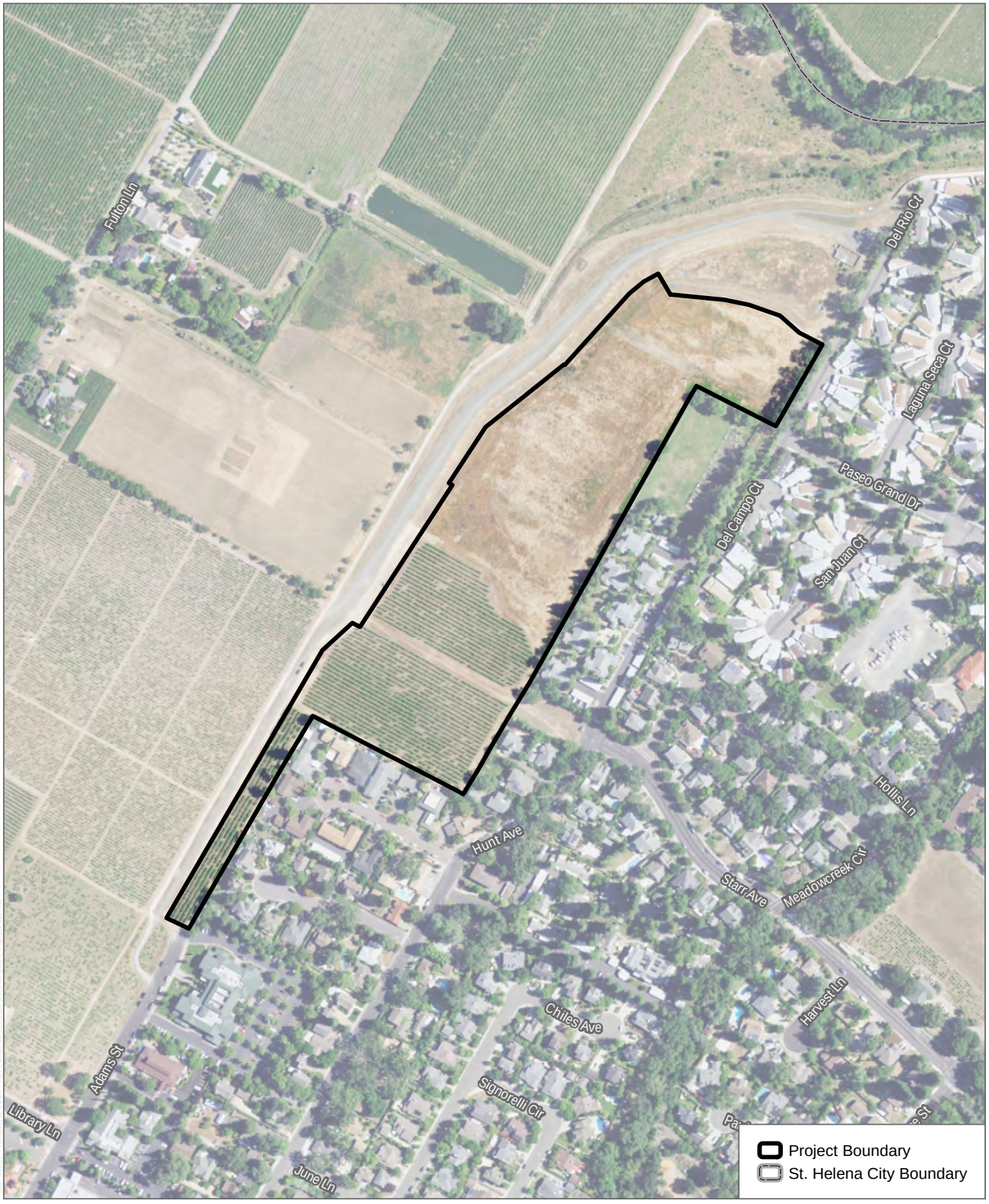

SOURCE: USDA 2016, USGS 2018, Napa County 2015

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0 165 330 Feet

FIGURE 2-2

Project Location

Hunter Subdivision Project

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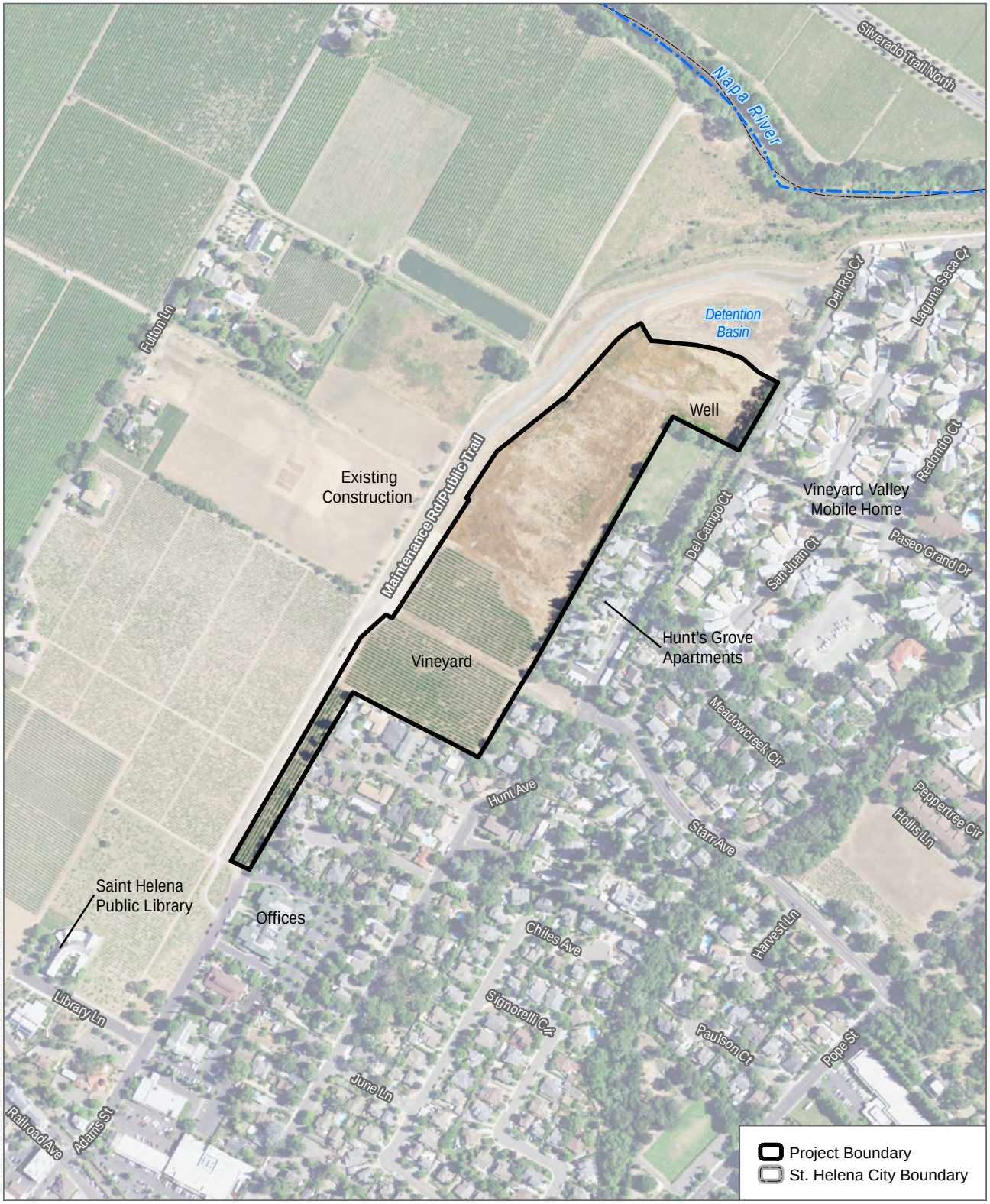

SOURCE: USDA 2016, USGS 2018, Napa County 2015

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0 200 400 Feet

FIGURE 2-3

Existing On-Site and Adjacent Land Uses

Hunter Subdivision Project

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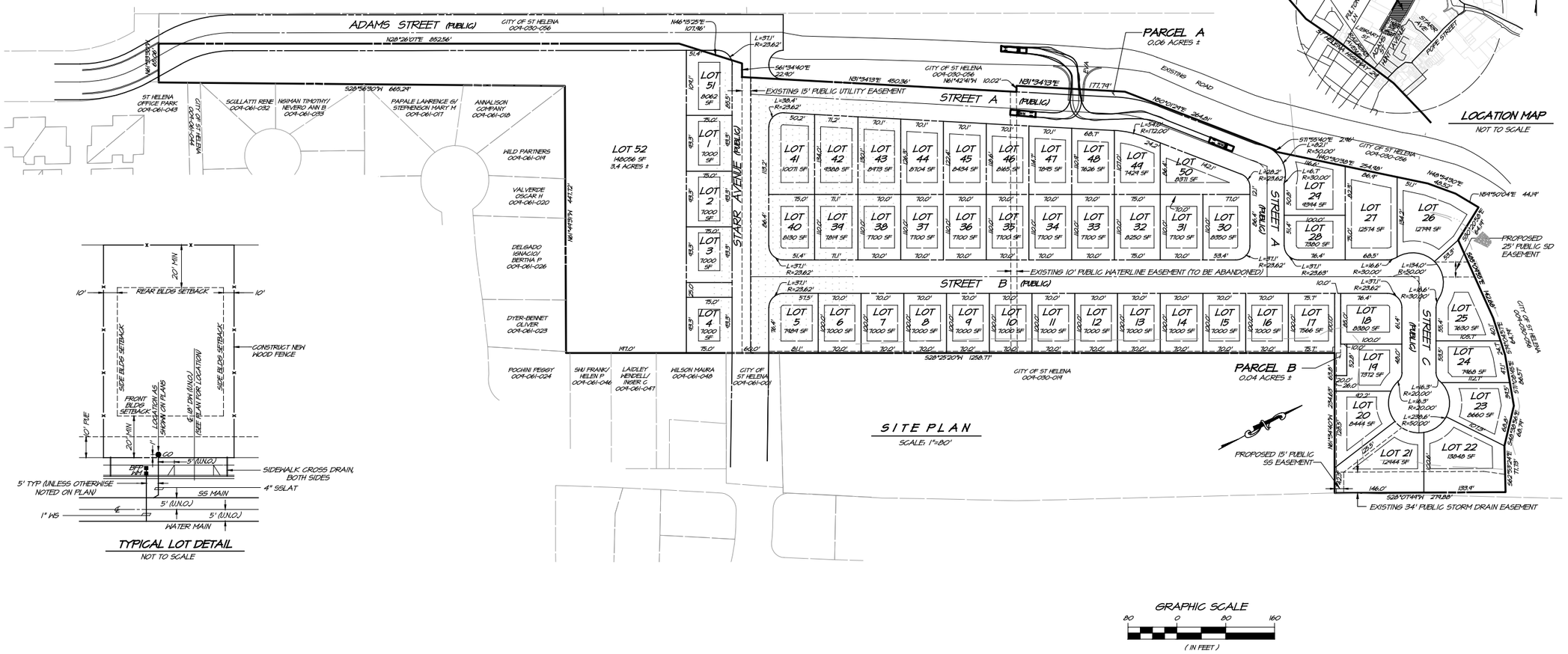

SOURCE: RSA 2019

FIGURE 2-4

Proposed Tentative Map

Hunter Subdivision Project

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There are no significant natural features on the site, and the City has not officially designated any significant viewsheds that would be affected by development of the site.

Project Background

The majority of the Project site was acquired by Dennis Hunter in 1997. Planning efforts were first initiated for developing the property in 2005. In 2008, the City and Mr. Hunter agreed to a land trade and a lot line adjustment to facilitate the City's Flood Protection Project (see below), resulting in the current configuration of the Project site in 2009. Mr. Hunter allowed the placement of excess fill material from the Flood Protection Project on the site.

The applicant's planning for the Project site was reinitiated later in September 2010, and an application was filed with the City for a Tentative Subdivision Map to subdivide the property for residential development. The application was accepted as complete by the City on March 28, 2011.

In 2011, the City completed construction of the Flood Protection Project which consisted of river channel improvements, a levee, and floodwall construction along the Napa River adjacent to the Project site. The Flood Protection Project was designed and constructed to meet or exceed all design criteria for Federal, State and local flood control projects. In December 2011, the City submitted an application to the Federal Emergency Management Agency (FEMA) to request a Letter of Map Revision (LOMR) that would revise the National Flood Insurance Program (NFIP) map and Flood Insurance Study report for the area subject to the Flood Protection Project. FEMA completed its review of the LOMR and officially revised the FIRM that covers the Project site and effectively removed the Project site from the 100-year flood hazard area. The effective date of the revised FIRM is November 5, 2012. The Project site is now designated Zone X, which FEMA identifies as an area with a moderate to low risk of flooding due to a levee failure and is considered protected from a 100-year flood event (FEMA 2018).

In 2012, the City prepared an EIR to evaluate the Proposed Project[1] and in 2013 the Proposed Project came before the City's Planning Commission for review. The Planning Commission did not take action on the Proposed Project and the item was continued. Additional information was submitted by the Proposed Project applicant, which resulted in the need to revise and update the Draft EIR.

[1] As noted earlier, the Proposed Project requires the approval of the proposed tentative subdivision map and several subsequent discretionary actions. These subsequent actions are discussed later in this chapter.

City of St. Helena 1993 General Plan and 2019 General Plan Land Use Designations and Zoning

The Project site was designated for residential development in the 1975 City of St. Helena General Plan , as Medium Density Residential (MDR) in the City of St. Helena 1993 General Plan, and is designated MDR in the City's recently adopted "General Plan Update 2040" (the 2019 General Plan). Because the tentative map application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project, since this version of the plan was in effect in 2011. This EIR also evaluates consistency with the City's current General Plan (adopted 2019) for informational and consistency purposes.

The 1993 General Plan described the MDR land use category as follows:

> **Medium Density Residential (MDR).** The MDR designation provides for single-family detached and attached homes, secondary residential units, public and semi-public uses, and similar and compatible uses. Residential densities shall be in the range of 5.1 to 12.0 dwelling units per gross acre. The MDR designation is the predominant residential designation, occurring throughout large areas of the City. The wide distribution of this designation is intended to maintain a development pattern in newly developing areas that is consistent with historic development patterns.

The current (adopted 2019) General Plan describes the MDR land use category as follows:

> **Medium Density Residential (MDR).** The MDR land use designation includes single-family attached and detached homes, and compatible uses. This designation permits residential densities between 5.1 and 16.0 dwelling units per acre. Retained from the 1993 General Plan, the MDR designation is the City's predominant residential designation and it is intended to maintain a development pattern in St. Helena's higher density areas that is consistent with historic development patterns.

Both versions of the General Plan contain the same basic description of the MDR land use category, except for the maximum density. Under the 1993 General Plan, this land use designation permits densities of 5.1 to 12.0 dwelling units per acre (du/acre) which would allow a maximum of 202 dwelling units assuming a density of 12.0 du/acre. The 2019 General Plan maintains the same MDR land use designation but allows a maximum density of 16 du/acre, which would allow a maximum of 270 dwelling units.

In order to comply with the General Plan, development on the site must include at least 87 dwelling units. The applicant intends to meet this requirement with a combination of 51 single family homes (to be built on the 51 single family lots created by the proposed subdivision), attached multi-family units on lot 52 of the subdivision, and accessory dwelling units (ADUs).

The zoning designation for the Project site is also Medium Density Residential (MR). The MR district implements the MDR General Plan designation. The MR district is described in the current Zoning Code as follows:

> The MR district is established for consistency with the medium density residential general plan designation. The district provides for single-family detached homes, accessory dwelling units, limited agricultural uses and compatible uses. Residential densities shall not be less than 5.1 dwelling units per acre nor more than sixteen (16) dwelling units per acre.

Uses in the MR zoning district include single-family detached homes, ADUs, limited agricultural uses and compatible uses. The MR district also allows attached duplex and triplex units, condominiums, and townhouses, and similar uses with a conditional use permit. Included within the MR zoning is a density bonus that may be given for housing projects that are affordable for persons of very low, low, or moderate income (Chapter 17.40, Section 17.40.60 (F)). The applicant has not requested consideration of a density bonus as part of the Proposed Project application.

The City's General Plan Housing Element Update 2015-2023 was revised and last updated in May 2015. The City's 2015-2023 Housing Element identifies the site as vacant and underutilized (City of St. Helena 2015b, p.133, Table 43).

2.2 PROJECT OBJECTIVES

CEQA requires an EIR to include a statement of objectives for a project, including the underlying purpose of the project. These objectives help the lead agency determine the alternatives to evaluate in the EIR (CEQA Guidelines, Section 15124(a)). The following is a list of objectives for the Proposed Project:

- Subdivide the site consistent with the City's General Plan and Zoning for the site to accommodate residential development.
- Provide opportunities to develop a variety of housing types, including multi-family, single-family, and accessory dwelling units, affordable to a range of incomes including, very low, low and moderate-income households.
- Provide opportunities to contribute to the provision of workforce and affordable housing consistent with the City's adopted Housing Element and the Regional Housing Needs Assessment (RHNA) approved by the Association of Bay Area Governments (ABAG).
- Minimize traffic-related environmental impacts, such as noise, air quality and greenhouse gases by lowering commute patterns for St. Helena workers by providing more local housing opportunities.

- Support alternative transportation by providing a pedestrian and bicycle linkage through St. Helena, eventually connecting the regional Vine Trail from Calistoga to the Vallejo Ferry.
- Exceed the City's green building ordinance (Municipal Code Chapter 15.53) and incorporate sustainable design features including water conservation measures, drought resistant landscaping with low flow watering systems, south and west side tree placement to reduce reliance on air conditioning units, and pre-wiring for photovoltaic systems.
- Implement the General Plan Circulation Element by completing the planned extension of Starr Avenue and the partial planned extension of Adams Street from where Adams Street terminates to connect to the Project site.
- Minimize City water use by continuing the use of an existing on-site water well for irrigation of Proposed Project landscaped areas.

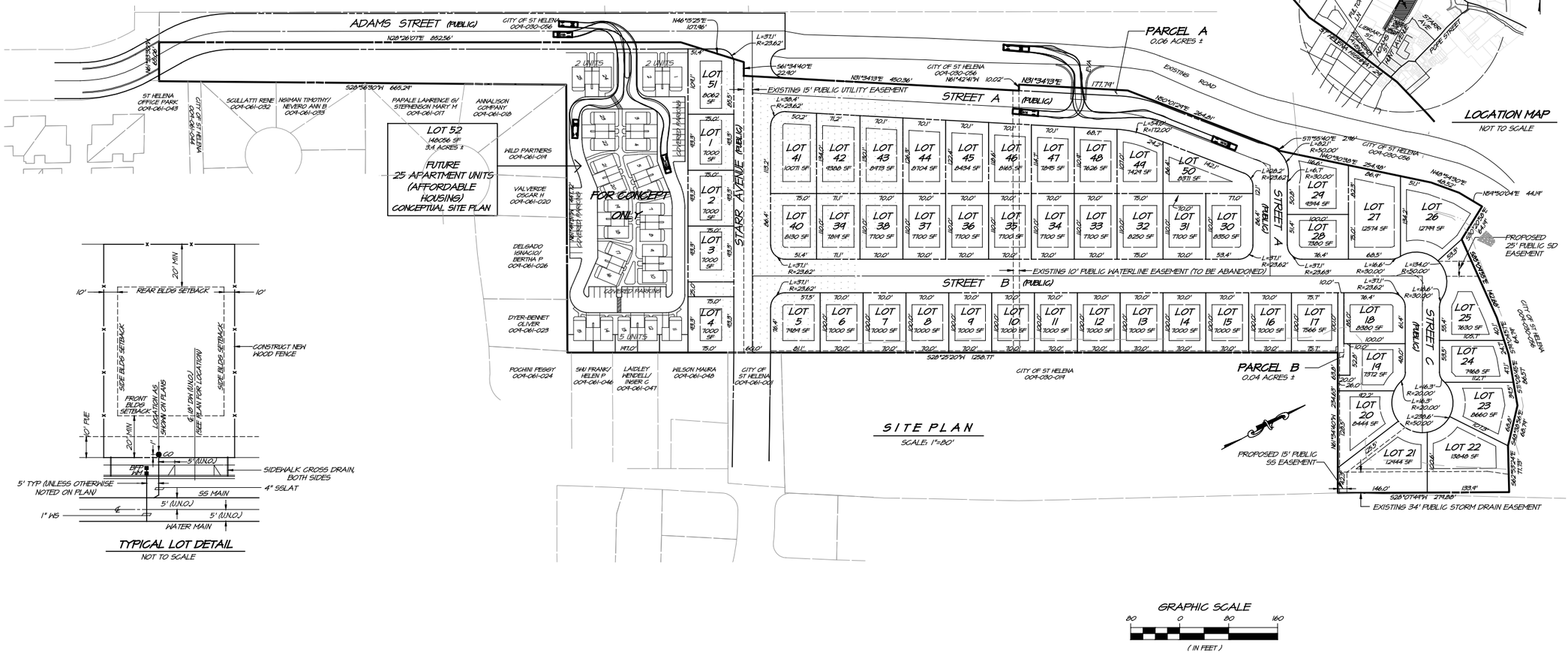
2.3 PROPOSED PROJECT

The Proposed Project applicant has applied for a Tentative Subdivision Map to subdivide the site into 51 lots (sized for single-family residences), a 3.4-acre parcel, and two lettered lots: a 0.06-acre parcel (Parcel "A") and a 0.04-acre parcel (Parcel "B"), as shown in Figure 2-4, Proposed Tentative Map.

Beyond the Tentative Subdivision Map application before the City at this time, the Proposed Project applicant has stated their intent to ultimately develop the 51 lots with 51 single-family, market-rate residences. Additionally, homes on 11 of the 51 lots would be developed with an ADU as part of their initial construction. Affordability of the attached units would be addressed in an Affordable Housing Agreement which would require approval by the City Council subsequent to approval of the Tentative Subdivision Map.

The applicant intends to ultimately develop the 3.4-acre parcel with 25 attached multifamily residential units. The affordability of these multi-family units will be the subject of the future Affordable Housing Agreement. A conceptual layout of how the multifamily units could be designed is shown in Figure 2-4A. However, this layout has not been formally submitted and is not under consideration for approval at this time.

The applicant has not expressed any intent to develop the 0.06-acre Parcel A.



SOURCE: RSA 2019

FIGURE 2-4a

Proposed Tentative Map with Conceptual Multi-Family Layout

Hunter Subdivision Project

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The 0.04-acre Parcel B is being created to accommodate an existing agricultural well, which would be retained and used to irrigate onsite landscaped areas. No other development would take place on Parcel B.

The Proposed Project applicant's ultimate intended development of the site would require several subsequent discretionary approvals—beyond the current application for a Tentative Subdivision Map—that are not before the City at this time. Nevertheless, to ensure full analysis of what is reasonably foreseeable, this EIR analyzes the applicant's ultimate intended development of the site as the Proposed Project.

Table 2-1 provides a breakdown of the total development proposed by the applicant.

Table 2-1
Proposed Project Land Use

Proposed Land Use	Zoning	Acres	Residential Units	Average Density (du/ac)
Single Family Residences	MR	13.4	51	
Accessory Dwelling Units[1]			11	
Attached Units[2]	MR	3.4	25	
Undeveloped	MR	.06	--	
Agricultural Well Site	MR	.04	--	
	Project Total	16.9[3]	87	5.1

Source: Hunter Subdivision Tentative Map 2021.
Notes:
1 Accessory units would be constructed by the applicant/developer concurrently on 11 of the single-family lots.
2. Attached units include duplex or triplex units would be included within Lot 52.
3 Numbers above add to 17 due to rounding. Site area is 16.9 acres.

The 87 residential units (51 single family homes, 25 attached units, 11 ADUs) would provide for an average density of 5.1 du/ac. Because the General Plan establishes a minimum density for the MDR land use category, this is the minimum number of units which can be constructed on the Project site. (The 2019 General Plan allows up to 16 units per acre, for a maximum potential buildout of 270 units.)

As shown on the proposed Tentative Subdivision Map, the single-family lots would range in size between approximately 7,000 and 12,000 square feet, with most of the lots in the 7,000 to 8,000 square foot range. A number of irregular shaped lots would be located along the eastern edge of the Project site and along the cul-de-sac (see Figure 2-4).

Each lot would have a minimum size of 7,000 square and a minimum width of 70 feet, per the standards of the MR zoning district. The development standards of the MR zoning district require a minimum 20-foot front and rear setback, and a 10-foot setback on the sides (or a 20-

foot setback in a street side yard). The MR zoning establishes a maximum height for principal dwellings of 30 feet (allowing for a 2-story home). Any accessory structure, such as an ADU, would be limited to a maximum height of 15 feet.

The 3.4-acre parcel (Lot 52), is proposed to be developed with 25 attached multifamily housing units including 30,000 to 45,000 total square feet of building area. The applicant's conceptual design for Lot 52 shows two-story, two-bedroom units each with a single-car garage and an on-site parking space plus covered guest parking spaces. A conceptual layout of the Lot 52 site along with conceptual renderings of the structures are shown in Figures 2-5 and 2-6. A specific design for these units has not been filed with the City and would be the subject of a future Design Review application.

Access to Lot 52 would be provided from Adams Street and a driveway connection to Starr Avenue, which would be extended to intersect Adams Street north of the Project site.

As discussed in Section 2.4, below, construction of detached and attached residential units would require design review approval by the Planning Commission, while development of the attached residential units would also require approval of a conditional use permit.

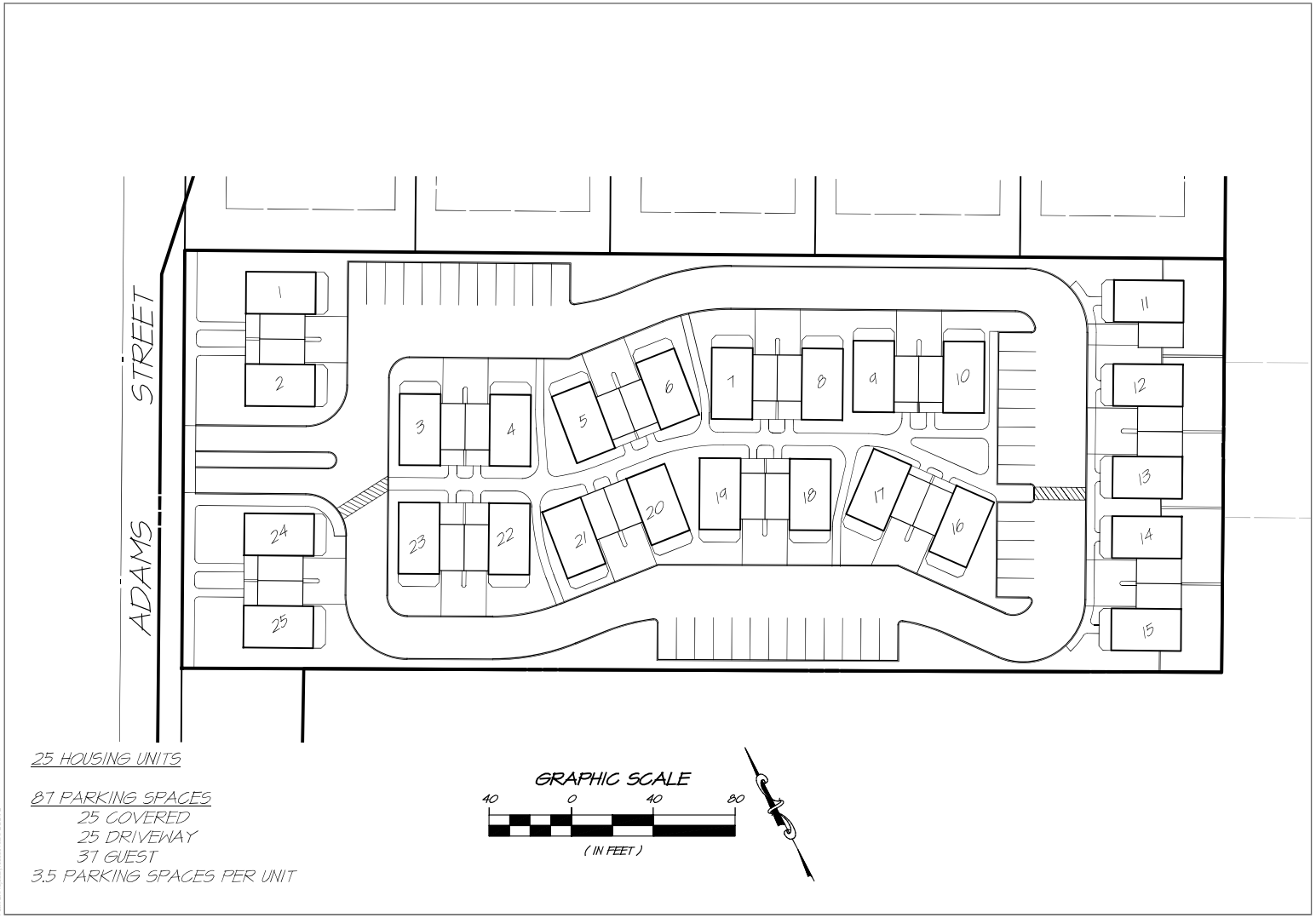
Affordable Units

The Proposed Project applicant has proposed to enter into an Affordable Housing Agreement with the City for the 25 multi-family units. The agreement will stipulate how these units would be managed (such as by the Proposed Project applicant or a non-profit organization) to ensure the required affordability requirements are met and maintained over the term of the agreement.

The Affordable Housing Agreement is still being discussed by the City and the Proposed Project applicant and is not proposed or required for review and approval with the Tentative Subdivision Map. A final Affordable Housing agreement approved by the City Council would be required prior to recordation of a final subdivision map.

Accessory Dwelling Units

The City's Zoning Ordinance (Municipal Code Section 17.116.030) and state law provides for the construction of an ADU on any lot which is zoned for residential use and has an existing single-family residence. Such units may be rented (for a period of not less than 30 days) but may not be sold separately from the main residence. As discussed earlier in this section, the Proposed Project applicant proposes to construct 11 ADUs on 11 of the 51 single family lots created by the proposed Tentative Subdivision Map.



SOURCE: RSA 2017

FIGURE 2-5
Conceptual Layout of Lot 52
Hunter Subdivision Project

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SOURCE: Ben Vanzutphen 2018

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FIGURE 2-6

Conceptual Rendering of Multi-Family Housing

Hunter Subdivision Project

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Construction of an ADU would require only ministerial approval on any lot which contains a single-family residence (as is the case in all residentially zoned lots in the City which contain one single-family residence).

The Proposed Project is proposing 11 ADUs which equates to approximately 22% of the total number of single-family residences. By comparison, applications for ADUs in St Helena between 2013 and 2020 totaled approximately 37, equal to about 1.7% of all single-family residences in the city.

Population

The City uses a persons per household factor of 2.45 people per unit for medium/higher density residential land uses (City of St. Helena 2013). Using this factor, the 87 units in the applicant's development proposal (including ADUs) would conservatively generate 213 residents.[2]

Site Access and On-site Circulation

Development of the Project site would require the extension of Adams Street and Starr Avenue onto the Project site to provide two points of ingress and egress, as shown in Figure 2-4.

Adams Street would be extended from the terminus of the existing roadway approximately 550 feet to the northeast, ending at the Project site and connecting to the Project's internal roadway network. The southwestern portion of the existing gravel maintenance road at the end of Adam's Street would be modified by the Proposed Project to enable access to the Project site. The remainder of the maintenance road would remain a gravel road (see Figure 2-4). The existing trail parallel to the maintenance road would remain and would not be altered by the Proposed Project. Sidewalks would be installed on both sides of the Adams Street extension along with a 6-foot wide planting strip.

Starr Avenue would be extended approximately 165 feet northward from Hunt Avenue, crossing a City-owned parcel before entering the Project site and connecting to the Project's internal roadway network before ultimately intersecting with the extension of Adams Street. Sidewalks would be installed on both sides of the Adams Street extension along with a 6-foot wide planting strip.

The extension of Starr Avenue would divide the site into two portions. The western portion would include five single-family lots and the 3.4-acre multi-family lot. The eastern portion would include the other 46 single-family lots, the 0.06-acre remainder parcel "A" and the 0.04-acre parcel "B" for the agricultural well.

[2] Note: ADUs typically are occupied by 1 or 2 people; therefore, it is anticipated fewer than 213 people would occupy the Proposed Project upon completion.

The portion of the site south of the proposed Adams Street extension consists of approximately one acre of existing vineyards, which would be preserved as part of the Proposed Project.

The Adams Street extension is currently a City-owned right-of-way. The Proposed Project applicant would dedicate the additional right-of-way necessary for the extensions of Adams Street and Starr Avenue and would be responsible for construction of the two public road extensions. All new streets would be designed and constructed consistent with existing City street standards.

As shown on Figure 2-4, three new local streets (Streets A, B, and C) are proposed within the Project site. Single-family lots would be located on the south side of Street A, and on both sides of Streets B, C and the Starr Avenue extension.

As shown on the proposed Tentative Subdivision Map (Figure 2-4), the proposed width of the Adams Street and Starr Avenue extensions is 60 feet, consistent with the City's minor residential street standard. Streets A, B, and C would be 56 feet wide and would allow parking on both sides. All streets would include curb, gutter, and 4-foot-wide sidewalks and 6-foot wide planting strips on both sides of the street.

The Proposed Project would provide sidewalks for pedestrians. Bicyclists would use the on-site streets. The Proposed Project would also support subsequent extensions to provide non-vehicular access. Streets A, B, and C would be constructed by the Proposed Project applicant and dedicated to the City.

Emergency vehicle access would be provided via the extension of Adams Street, Starr Avenue, and an emergency vehicle access (EVA) to the existing gravel maintenance road that borders the north/northwest boundary of the Project site. The EVA would prohibit through traffic by installing bollards or other devices to prevent vehicle access. In the event of an emergency the City's Fire and/or Police department would access a knox box to unlock the bollards or other device to allow vehicle access.

On-street parking would be permitted along all Proposed Project streets including the extension of Starr Avenue and Adams Street.

No Class 1 (off-street bike path) or Class II (on-street striped) bikes lanes would be included as part of the Proposed Project.

Landscaping and Lighting

The applicant's proposed landscape plan includes approximately 185 trees, including 24-inch box scarlet maple (*Acer Rubrum*), Chinese pistache (*Pistacia Chinensis*) and tulip tree (*Liriodendron*

Tulipifera), as shown on Figure 2-7. Approximately 74 scarlet maple trees would be planted along the Adams Street extension to the intersection with Starr Avenue and along the Starr Avenue extension. Approximately 57 Chinese pistache trees would be planted along Street A. Approximately 54 tulip trees would be planted along Street B and the Street C cul-de-sac.

Trees would be planted mostly in rows of two to five with 10 feet of separation from streetlights. On the western edge of Starr Avenue the Scarlet Maples are proposed in a solid row of nine trees between Street A and Street B. Sidewalk planting strips would have hydro seed native grasses and drought tolerant plantings between the trees that are adapted to the City's climate.

The existing vineyards on the Project site would be removed with the exception of an approximately one-acre portion of the vineyard that would remain located in the westernmost "panhandle" portion of the site.

All public landscaping and irrigation would be required to meet the California Code of Regulations Title 23. Chapter 2.7 Model Water Efficient Landscape Ordinance requirements.

The Proposed Project includes 28.5-foot-tall standard streetlights along all residential streets.

A Homeowners Association (HOA) would oversee maintenance of public landscaping, including the approximately one-acre vineyard located in the southwestern "panhandle" portion of the site, and streetlights. The streetlights would be designed to conform with Lighting Zone 2 of Title 24, Part 6, of the California Code of Regulations.

Walls/Fences

Per the proposed Tentative Subdivision Map, the rear yard of Lots 1 through 51 would include a 6-foot high wood fence for privacy. A retaining wall that varying in height from 2 to 4 feet is proposed along the rear property line of Lots 5 through 22. The wall would be constructed of concrete masonry block.

Infrastructure Improvements and Public Services

Water, sewer, and storm drain services would be provided by the City. The Proposed Project would include new water, sewer, and storm drain infrastructure on site to serve the residential development designed in compliance with City specifications. The Project site is currently not served by City utilities. There is an existing groundwater well in the eastern area of the site (on proposed Lot 19). The Proposed Project's on-site water, sewer, and storm drain lines are proposed to be located within the street/driveway rights-of-way within the Project site.

Water Supply

With the abandonment of the 10-foot public water main easement and the existing 12-inch water main within this easement, a 12-inch public water main would be realigned and constructed by the City, proposed to be within the Starr Avenue right-of-way, as shown on Tentative Map page TM5. The existing 12-inch water line traverses the site generally north/south to the east of Starr Avenue within a 10-foot easement; this line would be relocated as part of development of the site.

The Project is proposing a looped 8-inch water main within Streets A and B that would connect to the existing water main at two locations. A new 8-inch water main is also proposed within the extension of Adams Street to connect to the existing water main at the southwest end of the Project site. As noted above, an existing 12-inch water line would also be relocated within the site to provide continued service to customers.

Fire hydrants and other appurtenances would be located and installed pursuant to City standards.

An existing agricultural well is located near the eastern end of the Project site that is proposed to be maintained in place (in proposed Lot 19) and used to provide non-potable irrigation of all on-site landscaping areas, including private front and rear yards. The well is proposed by the Project applicant to be owned and maintained by a homeowners' association or similar method; public ownership or operation is not proposed. A lot is shown on the proposed tentative map for the well site and access to the local street for maintenance, power, and water lines.

Water lines would be extended within the Project site from the agricultural well to serve the landscaped areas in the public right-of-way, at the individual homes and the future multi-family site, and the retained vineyard.

The Proposed Project would be designed not to exceed 0.4 acre-feet/year/dwelling unit of water based on the installation of increasingly efficient and lower-water-using fixtures and appliances and irrigation systems. For further detail on the Proposed Project's water demands, see Section 3.12, Public Services/Recreation and Section 3.13, Utilities. For information specific to the agricultural well and use of this well to provide the Project's landscape irrigation requirements, please see Section 3.9, Hydrology and Water Quality.

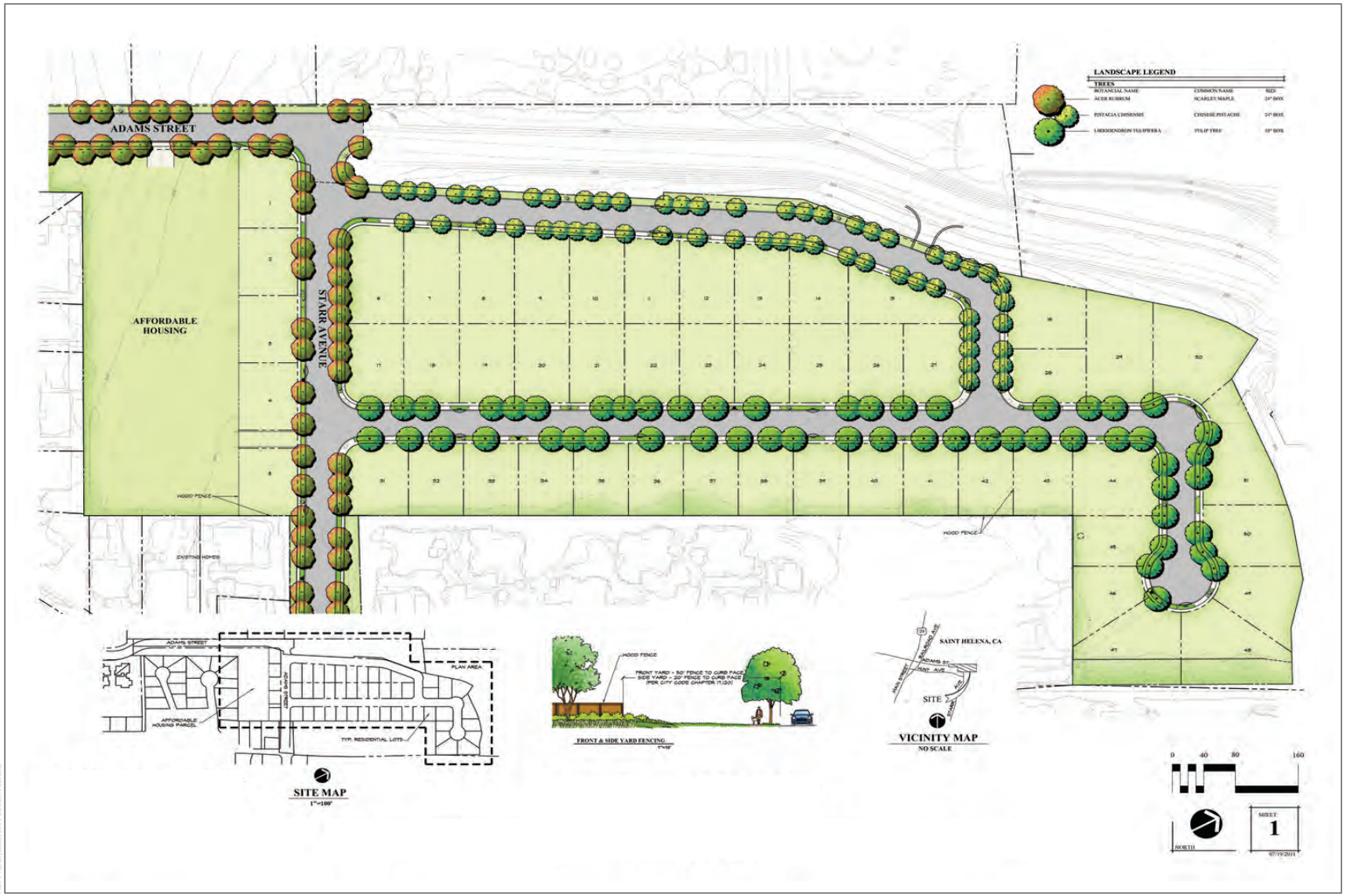

FIGURE 2-7

Landscape Plan

Hunter Subdivision Project

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Sewer System

Wastewater flows from the western end of the Project site are proposed to drain into an existing public manhole at the corner of Starr and Hunt Avenue via new 8-inch sewer pipes, as shown on Tentative Map page TM5. The area east of Starr Avenue, lower in elevation, is proposed to drain east through the Project site via new 8-inch sewer pipes, through Lot 21 within a public easement and into an existing public manhole on the adjacent parcel in the Vineyard Valley Mobile Home Park. The Proposed Project would install 8-inch sewer lines within all roadways to service the residences.

All sewer mains are sized to accommodate Proposed Project flows, per City standards, and designed at slopes to provide required self-cleaning velocities. Sewer laterals would be installed per City specifications.

Storm Drainage and Stormwater Quality

The Proposed Project would connect to existing storm drain infrastructure. New storm drain lines would be installed in Streets A, B, C and Adams Street. As shown on Tentative Map page TM 5, the southwesterly portion of the Project site is proposed to drain via gutter flow and proposed storm drain pipes and discharge into the existing Starr Avenue storm drain at several different locations. The rest of the Proposed Project is proposed to drain to the northeast via gutter flow and storm drain pipes and discharge into the existing detention basin. The City requires that all storm drain pipes be sized to accommodate a 10-year storm within the pipe and 100-year storm within the street section.

Police and Fire Services

The Project site would be served by the St. Helena Police Department located at 1480 Main Street in St. Helena. The Police Department provides law enforcement services within the city limits and maintains 24-hour security patrol throughout the community. Fire protection services are provided by the St. Helena Fire Department located on the same site as the police department, which is less than a ¼-mile from the Project site. The fire department provides fire protection services within the city limits, including fire suppression, fire prevention, education, emergency medical and rescue services, and response to incidents involving hazardous materials.

Schools

The Proposed Project site is located within the St. Helena Unified School District, which operates four schools, including a primary school, elementary school, middle school, and a high school. The Proposed Project would be required to pay school impact fees to the School District at the time of building permit issuance.

Solid Waste Disposal

Upper Valley Disposal provides solid waste services to residents and businesses in the City. Solid waste is disposed of at the Clover Flat Landfill, a Class III landfill site, located off Silverado Trail north of the City.

Natural Gas, Electricity, Cable, and Telephone

The Proposed Project also includes natural gas, electrical, cable television, and telephone to serve proposed development. Natural gas is provided by PG&E and electric services would be provided by PG&E or MCE Clean Energy Community Choice Electricity program. Telephone service would be provided by AT&T and cable and internet services would be provided by a variety of providers including Xfinity, AT&T, and Valley Internet.

Offsite Improvements

Off-site improvements required for the Proposed Project include extending Starr Avenue approximately 165-feet to connect to the Project site and extending Adams Street approximately 550-feet to provide access to the site.

An emergency access for fire equipment would also be built to connect Street A with the existing maintenance road. All of these improvements would take place on land owned by the City.

Construction Details, Phasing, and Timeline

The applicant has not prepared a proposed phasing plan. According to the applicant, buildout of the Proposed Project would occur based on market conditions and the timeliness of obtaining building permits. The City may require the site be graded and construction of the backbone infrastructure be completed for the entire site as the first phase; however, the details of the Project's phasing plan have not yet been finalized.

If the Tentative Subdivision Map is approved and the applicant seeks and obtains all other required approvals, it is assumed the first phase of construction would require site clearing, grading, and trenching for utilities followed by construction of the roadways and residences.

For the purposes of the analysis it is assumed construction of homes would occur over a 6+ year period with the exception of the multi-family units, which the applicant proposes to build within a year of approval of Design Review, Use Permit to construct the units, and approval of the Final Subdivision Map.

Grading

Grading of the site would create a gradual downward slope from west to east towards the existing City storm water detention basin. To level the site and to ensure a stable base for new development, the existing fill/soils on the site would be removed, recompacted and returned to the site along with additional fill. The finish grade of most of the area east of Starr Avenue would be increased over the existing grade by the placement of approximately 1.5 to 2.5 feet of fill material; west of Starr Avenue the finish grade would be approximately 1 foot lower than the existing grade. The maximum depth of cut would be approximately 1.5 feet and the maximum depth of fill would be 5.0 feet. A former pond, located in the southeastern portion of the Project site, would require excavation of up to 10 feet due to anticipated settlement.

The estimated net grading quantity, as provided by the Proposed Project applicant, is approximately 24,321 cubic yards of fill to replace the 10,202 cubic yards of cut (RSA 2020).[3] This quantity does not include the spoils from the joint trench, roadways, curb and gutter, or foundations. It is the applicant's intent to balance the soils on site and not require the export or import of soils. Importing of some material, such as base rock, sand, and peat gravel that is used in the joint trenches, building foundations, and roadways would be required.

A summary of estimated earthwork quantities, provided by the applicant, is shown below.

Table 2-2
Earthwork Summary

Location/Item	Cut (CY)	Fill (CY)
Site Total	10,202	24,321
Pad Spoils[1]	5,200	
Trench Spoils[2]	4,500	
Vertical Spoils[3]	3,825	
Expansion[4]	510	
Subtotal	*24,237*	*24,321*
Import[5]	84	
Total	24,321	24,321

Notes:
1 Pad spoils assumed to be 100 cubic yards (CY) per lot due to post tension slab construction.
2 Trench spoils include water, sewer, storm drain, bioretention, irrigation water from well and joint trench.
3 Vertical spoils assumed at 75 yards per house and includes utility trenching in lot, landscape and final grading excavations to remove dirt from finished pad for drainage purposes.
4 Expansion assumed at 5% of the site total cut amount.

3 Earthwork quantities estimated by the applicant are based solely on a subtraction of finished grades from existing grades. They do not account for implementation of geotechnical recommendations, which based on a preliminary geotechnical study, is likely to consist of over-excavation and re-compaction of site soils to an average depth of 4.5 feet as part of site preparation for structural foundations, utility lines and streets. See Section 3.6 (Geology and Soils) for details.

[5] Net import or export less than 1% of the total volume amount (24,321 CY in this case) can be considered a balanced site.
Source: RSA Engineers, 2021.

Post-Construction Best Management Practices

The following post-construction best management practices (BMPs) would be implemented as part of the Proposed Project:

- Inlet labels “Drain to River”
- Private Street sweeping
- Downspouts to landscape swales
- Vegetated swales
- Homeowner education on storm water pollution prevention
- Hydrodynamic oil, water, and solid separation

Construction staging and parking for construction workers would be provided on site.

2.4 DISCRETIONARY ACTIONS AND USE OF THIS EIR

As part of the approval process, the City of St. Helena City Council will need to certify this EIR as meeting the requirements of CEQA and reflecting the independent judgement of the lead agency.

The City would then consider approval of the Tentative Subdivision Map. In order to approve the Tentative Subdivision Map, the City must find that the proposal is consistent with the 1993 General Plan and zoning.

In order for the Proposed Project applicant to commence grading and development of the site and homes, the City would require additional subsequent discretionary approvals including the following:

- Affordable Housing Agreement
- Design Review
- Use Permit required to construct attached multifamily units in MDR District

The City Council will also review the Final Map to ensure that all conditions have been satisfied.

The following permits and approvals[4] would be required to implement the Proposed Project, but are considered ministerial actions:

- Encroachment Permit for the road extensions
- Grading and Building Permits
- Water and Sewer Connections
- Other Administrative permits such as temporary and permanent encroachments, traffic management/construction parking, etc., and approvals would be required from other City departments

Responsible and Trustee Agencies

The EIR prepared for the Proposed Project would be used by responsible agencies and trustee agencies that may have some discretionary review or authority over approval of certain Proposed Project elements. Responsible agencies are public agencies, other than the lead agency, that have some approval authority over a project (i.e., issue a permit). Trustee agencies are state agencies having jurisdiction by law over natural resources held in trust for the people of the State of California, as identified in the CEQA Guidelines. The Proposed Project applicant would be responsible for obtaining all necessary permits, as required by law. The following responsible agency has been identified:

- San Francisco Regional Water Quality Control Board

The following agency has been identified as a trustee agency:

- California Department of Fish and Wildlife – Effects on special-status species

2.5 REFERENCES

FEMA (Federal Emergency Management Agency). 2018. National Flood Hazard Layer FIRMette. Accessed September 4, 2018.

City of St. Helena. 1993. City of St. Helena General Plan September 28, 1993.

[4] Note: Due to recent legislation under SB 330 (new Gov't Code sec. 66300), cities are prevented from "establishing or implementing any provision that . . . [a]cts as a cap on the number of housing units that can be approved or constructed either annually or for some other period. Thus, the City's Residential Growth Management System that limits residential development is no longer enforceable so would not apply to this Proposed Project.

City of St. Helena. 2018. St. Helena General Plan Update 2040, Draft Environmental Impact Report. SCH# 2010042001. October 23, 2018.

City of St. Helena. 2019. City of St. Helena 2040 General Plan Update. Adopted June 2019.

RSA. 2020. Approximate Raw Earthwork Quantities Based on Tentative Map. February 6, 2020.

CHAPTER 3.0
INTRODUCTION TO THE ANALYSIS

3.0.1 SCOPE AND FORMAT OF THE EIR

This chapter of the Draft Environmental Impact Report (EIR) discusses the environmental and regulatory setting, impacts, and mitigation measures from the proposed Hunter Subdivision Project (Proposed Project) for each of the following technical issue areas (Sections 3.1 through 3.15):

3.1 Aesthetics
3.2 Agricultural Resources
3.3 Air Quality
3.4 Biological Resources
3.5 Cultural, Paleontological and Tribal Cultural Resources
3.6 Geology and Soils
3.7 Greenhouse Gas Emissions
3.8 Hazards and Hazardous Materials
3.9 Hydrology, Drainage, and Water Quality
3.10 Land Use
3.11 Noise and Vibration
3.12 Public Services and Recreation
3.13 Public Utilities
3.14 Transportation and Circulation
3.15 Energy

It is important to note impacts of the environment on a project or plan (as opposed to impacts of a project or plan on the environment) are beyond the scope of required California Environmental Quality Act (CEQA) review. “[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project” (*Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473 and *California Building Industry Association v. Bay area Air Quality Management District* (2015) Cal.App 4th).

The Residential Growth Management System Ordinance (Chapter 17.152) of the City of St. Helena (City) regulates the residential growth within the City to approximately 2% per year. It limits the number of building permits to nine per year for market rate housing and caps the number of dwelling units to approximately 2,800, not including regulated affordable units, guest cottages, or accessory dwelling units. Since the City adopted its Residential Growth Management System in 1979 and last updated in 2002, the state passed Senate Bill 330 (see Government Code Section 66300). Section 66300 includes language that prevents cities from “establishing or implementing any provision that . . . [a]cts as a cap on the number of housing

units that can be approved or constructed either annually or for some other period" (Section 66300(b)(1)(D)(ii) [emphasis added]).

Under current state law the City can no longer implement a restriction on the number of residential units that can be constructed. There is an exception for growth control measures of this type approved by the voters prior to Jan. 1, 2005, if the affected city is in a "predominantly agricultural county," which is defined as a county that has more than 550,000 acres of agricultural land, and at least half the county area is agricultural land. Napa County does not meet the definition of an agricultural county; therefore, this exception is not applicable to the City.

Technical Studies

A number of technical studies were prepared as part of this Draft EIR and are included in the technical appendices. Studies prepared include the results of a Land Evaluation and Site Assessment to assess agricultural land (Appendix B), Biological Resource Assessment and Wetland Delineation (Appendix D), Cultural Resources Report (Appendix E), Geotechnical Reports (Appendix F), a Phase I Environmental Site Assessment (Appendix G), Hydrology Report (Appendix H), Preliminary Water Calculations (Appendix J), and a Traffic Impact Assessment (Appendix K).

Environmental Setting

According to Section 15125 subdivision (a) of the CEQA Guidelines, an EIR must include a description of the existing physical environmental condition in the vicinity of the project as they exist at the time when the Notice of Preparation (NOP) is published. This "environmental setting" will normally constitute the "baseline condition" against which project-related impacts are compared. Therefore, the baseline conditions for this EIR, unless noted otherwise, are based on conditions that existed in March 2018, when the NOP was published. The CEQA Guidelines recognize that the data for establishing an environmental baseline cannot be rigid. Because physical environmental conditions may vary over a range of time, the use of environmental baselines that differ from the date of the NOP is reasonable and appropriate in certain circumstances when doing so results in a more accurate or conservative environmental analysis.

For analytical purposes, impacts associated with implementation of the Proposed Project are compared against two different baselines: first, Proposed Project–specific effects are assessed against existing conditions at the time the NOP was first published; and second, cumulative effects are assessed against future, or "cumulative," conditions, generally defined as buildout of the City of St. Helena's 1993 General Plan because this General Plan was in effect when the Proposed Project application was deemed complete in September 2011. The City adopted the 2040 General Plan Update in May 2019. However, since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993

General Plan as the applicable general plan for the purposes of evaluating the Proposed Project. Nonetheless, this EIR will also evaluate consistency with the General Plan Update 2040 for informational purposes and the cumulative analysis will note any changes, if relevant between buildout assumptions under the 1993 General Plan as compared to the 2040 General Plan.

Existing conditions and the cumulative baseline can differ by issue area. In some instances the cumulative analysis information from the City's General Plan Update 2040 Draft EIR released in in October 2018 is referenced because this was the most current information regarding future cumulative development at the time of writing the technical section. Each technical section defines the existing conditions and cumulative baseline for the impacts being analyzed.

Project Analysis Assumptions

The Proposed Project is requesting approval of Tentative Subdivision map that includes 51 single-family lots, a lot designated for 25 attached multi-family units, and 11 accessory dwelling units. The City's Zoning Ordinance (Municipal Code Section 17.116.030) and state law provides for the construction of an accessory dwelling unit on any lot which is zoned for residential use and has an existing single-family residence. Such units may be rented (for a period of not less than 30 days) but may not be sold separately from the main residence. The Proposed Project applicant has proposed construction of 11 accessory dwelling units as part of the Proposed Project.

The Proposed Project application does not include a formal phasing plan. Therefore, for the purposes of this EIR buildout of the Project would occur based on market conditions and the timeliness of obtaining building permits. Therefore, it is assumed that the Project could take anywhere from 6 years or longer for full buildout, based on market and growth management factors. Most environmental impacts assessed in this EIR are analyzed in terms of the post-Project condition and are not substantially affected by the construction schedule. Air Quality and Greenhouse Gas Emissions for construction are affected by the length of construction. Therefore, emissions associated with a six-year buildout are conservatively assumed and provided in the air quality and greenhouse gases analysis (Sections 3.3 and 3.7).

In determining the level of significance of environmental impacts associated with the Proposed Project, the analysis in this Draft EIR assumes that the Proposed Project would comply with relevant federal and state laws and regulations, City General Plan policies, ordinances, and other adopted City documents, unless otherwise noted. Therefore, such mandatory policies, ordinances, and standards are not identified as mitigation measures, but rather are discussed as part of the "Regulatory Setting" governing the Proposed Project and compliance with these requirements often mitigate potential impacts.

Section Format

Each technical section in Chapter 3 begins with an **introduction** that explains the issues to be evaluated, provides a general summary of comments received in response to the NOP, and identifies the primary sources reviewed to prepare the analysis. The introduction is followed by a description of the Proposed Project's **environmental setting** and **regulatory setting** as it pertains to a particular issue.

The environmental setting establishes the baseline for that particular issue area and includes information relevant to the analysis of potential impacts. The regulatory setting provides a summary of applicable federal, state, and local regulations, plans, policies, and laws that are relevant to each issue area. The regulatory setting description in each section is followed by a discussion of the **methods of analysis** and the **thresholds of significance** used to evaluate Proposed Project–specific impacts. The **project-specific impacts** discussion is followed by an analysis of the **cumulative impacts** of the Proposed Project. This section addresses what the Proposed Project's incremental contribution to any existing cumulatively significant impacts would be and identifies mitigation measures, if required. The impact statement is prefaced by a number for ease of identification. An explanation of each impact and an analysis of its significance follow each impact statement. All **mitigation measures** are identified immediately following each impact discussion. The degree to which the identified mitigation measure(s) would reduce the impact is also described. Compliance with applicable laws, policies, and City regulations is assumed and will be identified in the impact analysis. In many cases, compliance with applicable laws, policies, or regulations would reduce the significance of a potential impact; and thus, would not be identified as a separate mitigation measure.

An example of an impact statement is shown below.

3.1-1: Would the Proposed Project have a substantial adverse effect on a scenic vista? This impact would be less than significant. (The significance finding prior to mitigation is included in each impact statement).

A discussion of potential impacts of the Proposed Project is presented in paragraph form. The Proposed Project–specific impacts associated with construction and operation of the Proposed Project are evaluated and compared to the threshold of significance for the particular impact. The analysis discusses the applicable local, state, and federal laws and regulations along with applicable general plan goals and policies that would reduce impacts, and assumes that the Proposed Project would comply with applicable laws, ordinances, goals, policies and regulations, and that the Proposed Project applicant would obtain all necessary permits and comply with all required conditions of those permits. In many instances, the actions that are necessary to reduce a Proposed Project impact are already required by existing laws or

requirements. The impact analysis concludes with a determination of the impact's significance in **bold type** (e.g., **significant impact, significant and unavoidable impact, potentially significant impact, less-than-significant impact, or no impact)**.

Mitigation Measures

A discussion of the applicable mitigation measures identified to reduce the significance of an impact immediately follows the impact analysis.

This section includes a statement indicating whether the mitigation measure would reduce the impact to a **less-than-significant level** or if the impact remains **significant and unavoidable** due to the absence of any available mitigation that could reduce the impact below the applicable threshold. A discussion of how the mitigation would reduce the impact is included before the mitigation measure.

Mitigation measures, if applicable, are numbered and presented in the following format.

> **AES-1** Statement of what, if any, mitigation measures are required.

Note that CEQA Guidelines, Section 15370, defines mitigation as follows:

- Avoiding the impact altogether by not taking a certain action or parts of an action
- Minimizing impacts by limiting the degree of magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- Compensating for the impact by replacing or providing substitute resources or environments

In addition, provided there is a "reasonable plan for mitigation" and contributions are "sufficiently tied to the actual mitigation" of the project's impacts, a commitment to contribute a fair share to such a program discharges an agency's mitigation duty under CEQA (*Save Our Peninsula Com. v. Monterey County Bd. of Supervisors* 2001) 87 Cal.App.4th 99, 141); see also CEQA Guidelines, Section 15130(a)(3) [recognizing that a project's contribution to a cumulative impact may be less than cumulatively considerable where "the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact"]; see also *Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173).

Cumulative Impacts

An analysis of cumulative impacts follows the evaluation of Proposed Project impacts under existing conditions in each section in Chapter 3. As defined in CEQA Guidelines, Section 15355, cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the Proposed Project, together with other past, present, and reasonably foreseeable projects causing related impacts.

An introductory statement that defines the cumulative analysis methodology and the cumulative context being analyzed for the respective sections (e.g., buildout of the City's General Plan, development within the Bay Area Air Basin) is included under the "Cumulative Analysis" discussion. In some instances, a Proposed Project–specific impact may be considered less than significant but would be considered potentially cumulatively significant in combination with other development within the surrounding area. Or, in some instances, a potentially significant impact could result on a project level but would not result in a cumulatively considerable impact. The cumulative impacts analysis is presented in the same format as the impacts section, shown above.

3.0.2 TERMINOLOGY USED IN THIS EIR

This Draft EIR uses the following terminology to describe environmental effects of the Proposed Project:

- **Thresholds of Significance:** A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant. Standards of significance used in this Draft EIR include those set forth in CEQA Guidelines Section 15065 (Mandatory Findings of Significance) and those derived from questions set forth in the most recent update to Appendix G to the CEQA Guidelines; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals and policies identified in the City of St. Helena 1993 General Plan. In fashioning criteria based on these sources, City staff has also relied on its own professional judgment and experience in some instances. In determining the level of significance, the analysis assumes that the Proposed Project would comply with relevant federal, state, and local regulations and ordinances.
- **Less-than-Significant Impact:** A project impact is considered less than significant when it does not reach the standard of significance, indicating that there would be no substantial change in the environment. No mitigation is required for less-than-significant impacts.
- **Potentially Significant Impact:** A potentially significant impact is an environmental effect that could cause a substantial adverse change in the environment; however,

additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

- **Significant and Unavoidable Impact:** A significant and unavoidable impact is an environmental impact that cannot be mitigated to a less-than-significant level. There are no feasible mitigation measures available to reduce the significance of the impact; therefore, the impact is considered significant and unavoidable.
- **Cumulative Impact:** According to CEQA, “cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines, Section 15355). CEQA requires that cumulative impacts be discussed when the “project’s incremental effect is cumulatively considerable” (CEQA Guidelines, Section 15130[a]).

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3.1 AESTHETICS / VISUAL RESOURCES

3.1.1 Introduction

This section describes the aesthetics and visual resources present in the Project area and discusses applicable federal, state, and local regulations pertaining to protection of visual resources. This section evaluates the potential effects on visual resources associated with development of the proposed Hunter Subdivision Project (Proposed Project).

Comments received in response to the Notice of Preparation (NOP) included concerns regarding the proposed design of the residential units, impacts to surrounding viewsheds and scenic vistas, impacts to landscape buffers, and light spillover impacts to the night sky. All of the concerns raised are addressed in this section. A copy of the NOP and comments received is provided in Appendix A. The Proposed Project applicant is only requesting approval of a Tentative Subdivision Map at this time; therefore, no building design details have been provided and an analysis of project design features is not included. As noted in Chapter 2, Project Description, if the Proposed Project is approved the City would require additional subsequent discretionary approvals, including Design Review.

Information contained in this section is based on site plans, a field survey, and City planning documents (including the 1993 General Plan and the 2019 General Plan). Other sources consulted are listed in Section 3.1.6, References.

3.1.2 Environmental Setting

This section describes the existing setting in the Project area and identifies the resources that could be affected by implementation of the Proposed Project.

Regional Setting

The City of St. Helena (City) is situated within the Napa Valley floor, bounded by the Mayacamas Mountain Range on the western and northern sides and the Howell Mountains on the eastern side. The region is located within the Napa Valley American Viticultural Area and is famous for the widespread vineyards that characterize the valley. The Napa River bisects the valley and flows through the eastern portion of the City. The City's terrain ranges from flat agricultural areas to gently rolling foothills. The primary regional access route to the City is State Route (SR) 29, a north-south corridor that passes through the Napa Valley. The City has a rural aesthetic characterized by open space, agricultural lands, wineries, wooded hillsides, and stream corridors. The City has views of many hills and mountainsides, including Mount St. Helena, a peak of the Mayacamas Mountain Range located in Robert Louis Stevenson State Park.

Development within the City is relatively compact, with the majority of commercial development and wineries situated along the SR 29 corridor, and residential development surrounding the Central Business District along SR 29 between Sulphur Springs Creek and Pine Street. Residential development within the City is primarily located west of Main Street and north of Sulphur Springs Creek. Flat agricultural lands surround the central developed area of the City, while limited rural residential development occupies wooded hillsides to the east and west of the City.

Project Site

The 16.9-acre Project site is characterized by row vineyards in the western portion and undeveloped land consisting of annual grasses in the eastern portion of the site (see Figure 2-2 in Chapter 2, Project Description). Approximately 40% of the Project site currently supports a small vineyard. Based on the Proposed Project's grading plan, the elevation of the site ranges from approximately 230 feet above mean sea level (amsl) on its southern edge to approximately 212 amsl on its northern edge. Adams Street terminates at the western boundary of the site, three blocks east of downtown and SR 29. Office uses, including an off-white two-story building with large reflective windows, are located immediately adjacent to the site's most western edge at the terminus of Adams Street.

Vineyards are located to the north and northeast of the Project site, with a small number of large 1- and 2-story single-family residences located north of the Project site. The George and Elsie Wood Public Library, a one-story tan-colored building with a small patch of vineyards, is located approximately 0.1 of a mile northwest of the Project site. A gravel maintenance road/public trail lined with a simple wood-post and barbed wire fence abuts the northern boundary of the Project site. One and two-story single-family and multi-family residential development is located to the south of the site. Residences to the south of the Project site include a mix of neutral-colored buildings in a variety of styles with mature trees and shrubs. Single-family residences front Grove Court and Monte Vista Avenue to the east and some include backyards while others do not. The Vineyard Valley Mobile Home Park and multi-family housing in the Hunts Grove Apartments complex are located south and east of the Project site. Multi-family residences are primarily located along Hunt Avenue and either front the street or face the Project site. These residences are separated from the Project site by either a low stone wall or a taller wood and wire fence. Residences along Del Campo Court and Del Rio Court are neutral-colored single-family residences that face the Project site.

The Napa River is located approximately 0.1 miles north and northeast of the Project site.

The Project site was designated as high-density housing in the 1975 St. Helena General Plan as Medium Density Residential (MDR) in the City's 1993 General Plan (City of St. Helena 1993), and as MDR in the 2019 General Plan. Land designated as MDR typically is for residential

purposes, and provides for single-family detached and attached homes, secondary residential units, public and semi-public uses, and similar and compatible uses. The zoning designation for the Project site is also Medium Density Residential (MR) (City of St. Helena 2018).

Viewpoints

A viewshed is an analytical tool used to aid in the identification of views that could be affected by a project. The viewshed is defined as the surrounding geographic area from which a project is likely to be seen. Locations of key viewpoints that depict the viewshed visible in the Proposed Project vicinity are depicted in Figure 3.1-1 and photos from these representative viewpoints are shown in Figures 3.1-2 through 3.1-5.

Views from the Project Site

Long-range views from the Project site include views of surrounding wooded hillsides with tall trees. Surrounding hillsides including the Howell and Mayacamas mountains are visible from the Project site looking west and northwest due to the flat topography and lack of tall intervening structures. Short to mid-range views to the north of the Project site consist of the gravel maintenance road/public trail that borders the site, with vineyards visible beyond. Buildings associated with vineyards to the north of the site are also visible. Views to the south/east include views of single-family residences along Grove Court and Monte Vista Avenue, along with grassland vegetation and native plants and shrubs associated with undeveloped areas to the east of the gravel maintenance road/public trail. Adams Street is visible to the west of the Project site, along with a two-story off-white office building and the George and Elsie Wood Public Library, which are located on Adams Street. Short-range views of single-family and multi-family residences with a mix of mature trees are visible looking south/east from the Project site.

Views of the Project Site

The Project site is visible from residences to the south, as well as from the intersection of Hunt Avenue and Starr Avenue, where there is a clearing in the dense vegetation that borders the site to the south and southwest (Figure 3.1-2). From this intersection, the on-site vineyard and annual grasses on the site are visible in the foreground, with the Howell Mountains visible in the background.

The Project site is visible from the eastern terminus of Adams Street, which is adjacent to the western portion of the site (Figure 3.1-3). Views from this location are of the on-site vineyard, as well as vineyards on surrounding properties. Surrounding wooded hillsides can be clearly seen in the background from this location. Large, mature trees are also visible at the southern boundary of the site. From the gravel maintenance road/public trail to the north and northwest of the Project site there are uninterrupted views of the vineyard and grass areas on the Project site

in the foreground with views of multi-story residential units and tall evergreen trees in the background (Figure 3.1-4). Surrounding mountain ranges are largely blocked from view from the gravel maintenance road/public trail looking south towards the Project site. Views of the Howell Mountains can be seen looking to the east from the trail (Figure 3.1-3), and the Mayacamas Mountains can be seen looking towards the west from the trail (Figure 3.1-5). Residences along Del Rio Court to the southeast of the Project site experience views of grass and vegetation on the site in the foreground, and views of the Howell Mountains in the background (Figure 3.1-5). Adjacent residences are considered to have high sensitivity – both their expectations of visual quality and their time of exposure is typically greater than motorists traveling on adjacent roadways that comprise the other viewer groups.

The Project site is not visible from major transportation corridors such as SR 29/Main Street or the Silverado Trail, which is located approximately 0.2 miles east of the Project site. The Project site is also not visible from public parks in the vicinity of the site.

Scenic Resources

The California Department of Transportation designates SR 29 as an eligible state scenic highway (Caltrans 2018). The Project site is located approximately 0.2 miles east of SR 29. However, it is not visible from the highway due to intervening trees, buildings and structures. While there are many scenic resources and vistas within the City, there are no specific scenic resources or vistas designated for protection in the City's 1993 General Plan or the 2019 General Plan. No other scenic viewsheds or scenic highways are identified in the Project vicinity. No rock outcroppings or other significant natural or historical features exist on the site.

Light and Glare

Nighttime lighting is necessary to provide and maintain a safe and secure environment. Light that falls beyond the intended area of illumination is referred to as "light trespass." Types of light trespass include spillover light and glare. Spillover light, which is light that illuminates surfaces beyond the intended area, is typically caused by artificial lighting sources, such as from building security lighting, signs, parking lot lights, roadway lights, and stadium lights on playing fields. Spillover light can adversely affect light-sensitive uses (i.e., adjacent residences), by creating unwanted illumination. Because light dissipates as it moves farther from its source, the intensity of the lighting source is often increased to compensate for dissipating light, which can increase the amount of light that illuminates adjacent uses. The type of light fixture determines the extent to which light will spill over onto adjacent properties and/or be visible from far away. Modern, energy-efficient fixtures that face downward, such as cutoff-type fixtures and shielded light fixtures, are less obtrusive than light fixtures that have been used in the past.

SOURCE: Bing Maps 2019

DUDEK

0 120 240 Feet

FIGURE 3.1-1

Photo Locations

Hunter Subdivision Project

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View 1: Views from Gravel Maintenance Road/Public Trail Looking North

View 2: View from intersection of Hunt Avenue and Starr Avenue looking north

FIGURE 3.1-2

Existing Views

Hunter Subdivision Project

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View 3: View from the eastern terminus of Adams Street looking toward project site

View 4: View from the existing gravel maintenance road/public trail looking east

FIGURE 3.1-3
Existing Views
Hunter Subdivision Project

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View 5: View from the existing gravel maintenance road/public trail looking south

View 6: Views of on-site vineyards from gravel maintenance road/public trail

FIGURE 3.1-4

Existing Views

Hunter Subdivision Project

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View 7: View from the existing gravel maintenance road/public trail looking west

View 8: View from Del Rio Court looking west

FIGURE 3.1-5
Existing Views
Hunter Subdivision Project

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The second type of light trespass is glare, which results when a light source in the field of vision is brighter than the eye can comfortably accept. Glare can result from sunlight or from artificial light reflecting off building exteriors, such as glass windows, metal roofs or other highly reflective surface materials. Squinting or turning away from a light source is an indication of glare. Cutoff-type light fixtures minimize glare because they emit relatively low-intensity light at these angles. Glare resulting from sunlight reflecting off building exteriors can be reduced with design features that use low-reflective glass and exterior materials and colors that absorb, rather than reflect, light.

As the Project site is undeveloped, it does not contain existing light or glare sources. Existing light sources in the vicinity of the site include internal and external lighting from residences to the south, west and east of the Project site, vehicle headlights along adjacent roadways and buildings to the north of the site. Streetlights also line Adams Street to the west and Starr Avenue to the south at regular intervals up until the Proposed Project boundary.

3.1.3 Regulatory Setting

Federal Regulations

There are no federal regulations pertaining to visual resources that would apply to the Proposed Project.

State Regulations

The following state regulations would apply to the Proposed Project.

California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. County roads can also become part of the Scenic Highway System. To receive official designation, the county must follow the same process required for official designation of State Scenic Highways.

SR 29 throughout Napa County is eligible for designation as a state scenic highway. Although SR 29 is located approximately 0.2 miles from the Project site, the site is not visible from the highway due to intervening buildings and structures. There are no other designated or eligible highways within the Project vicinity (Caltrans 2018).

Local Regulations

The following local land use policies would apply to the Proposed Project.

City of St. Helena 1993 General Plan

The Land Use and Growth Management Element, Community Design Element and Open Space Element of the St. Helena 1993 General Plan provides guiding and implementing policies regarding visual resources. The City's General Plan states, "The "planned unit development" approach provides developers with greater design flexibility while ensuring the City adequate design review. The intent is to create developments that complement existing community character. The City will favor planned unit developments that provide generous amounts of open space, covered parking, the separation of pedestrian and vehicle traffic, and on larger tracts, a variety of housing types: single-family detached, duplex, and multi-family dwellings, in one and two-story structures" (City of St. Helena 1993).

Land Use and Growth

Policy 2.6.15: Encourage new residential development in all density ranges that is consistent with scale and character of the older residential districts of the City, particularly the neighborhoods west of Main Street.

Policy 2.6.17: Minimize situations where new residential development will block public view of surrounding vineyards.

Policy 2.6.19: Permit higher density housing in single family neighborhoods as long as the development character of the single family area is maintained (i.e., lot widths, orientation to street, building heights, etc.).

Policy 2.6.20: Encourage the subdivision and development of larger parcels (3 acres or more) as "planned unit developments" to ensure a more comprehensive and creative approach to planning the development as a single unit.

Community Design

Policy 4.3.4: Strengthen community identity by appropriate building design, size, and site landscaping.

Policy 4.3.5: Require future residential development to conform to the pattern and density of older, neighboring areas of town in order to complement existing town character and ensure that densities are high enough to protect against unnecessary incursion into vineyard agricultural areas.

Policy 4.3.23: Set residential densities throughout St. Helena at levels that will ensure that minimum encroachment on productive vineyard land or open space will occur during the life of the plan.

Policy 4.3.24: Encourage higher density residential development near the commercial core to provide convenient pedestrian access to shopping and services. Ensure that higher density projects are similar in design and scale to adjacent single family neighborhoods.

Policy 4.3.25: Within the primary urban area of St. Helena, encourage variety in housing types and density consistent with those found in the older neighborhoods of town. Encourage varying lot widths and configuration, but limit the allowable building envelope by parcel size to avoid overbuilt conditions.

Policy 4.3.26: Encourage residential building siting and design that is similar to that found in the older neighborhoods in town. In these areas consistent setbacks, porches and generously landscaped front yards add to community enjoyment by all. Restrict location of driveways and garages to minimize their visual impact on the street.

Policy 4.3.27: Encourage large specimen street trees and generous landscaping to shade homes and the street and to link various neighborhoods.

Policy 4.3.28: Limit residential development that backs up to vineyards and thereby blocks views of those vineyards by passersby.

Policy 4.4.2: When reviewing development proposals in areas not already served by a system of streets, City staff shall ensure that proposed development is sited in such a manner that it will not obstruct the logical extension of existing streets and infrastructure, or the expansion of the City's grid-like pattern of streets into newly developing areas. As with existing street patterns, new extensions of the city grid need not be rigid in their dimensions and layout, but should be evaluated on their contribution to the formation of a logical, interconnected system of streets that facilitates the safe and efficient flow of pedestrian, bicycle, and vehicular traffic, and establishes an attractive neighborhood environment. Staff can consider variations to the logical extension of existing streets if the project proponent can demonstrate that safety, aesthetics, topography, or other factors make such an extension ineffective or undesirable, or that such an extension would cause the landowner undue hardship. Street widths should be the minimum adequate for two-way traffic and parking. Narrower street widths as found in the older parts of St. Helena contribute to a more intimate small town scale and discourage speeding.

Policy 4.4.3: Driveways and garages should be as unobtrusive as possible, with garages preferably located at the rear of the lot.

Policy 4.4.4: Where streets are at the edge of the community, adjacent to vineyards, development should only occur on one side, leaving open views to the agricultural lands and hillsides.

Policy 4.5.1: The sense of a strong connection to the surrounding agricultural open space and hillsides must be preserved in the future. Views of vineyard, hillsides, creeks and major landscape features should be maintained.

Policy 4.5.2: Open space should be brought into the community wherever possible as a reminder of the natural setting of the community. Landscaping of residential areas should be generously oriented toward the enjoyment of the passerby. Street tree planting programs shall be pursued throughout the city to provide shade, a special character, and pedestrian comfort. Vineyard plantings within residential and commercial areas is encouraged.

Policy 4.6.1: Retain key undeveloped open space areas where views to the vineyard and hills can be maintained. Require that these areas be planted in vines or other low vegetation.

Policy 4.6.2: Discourage the use of cul-de-sacs. Where cul-de-sacs are necessary, do not allow houses to block views out to the vineyards. View corridors out from the ends of streets should be preserved.

Policy 4.6.3: Use streets to form the edge of the developed community. Maintain the edge fronting the vineyards as permanently undeveloped so that views of vineyards and beyond can be enjoyed by the general populace. Orient lots facing across the street to orient toward this view.

Policy 4.7.3: The new eastern entry via the Adams extension should be planned to maximize open space and vineyard views. Where possible, vineyards should be maintained up to the road edge. Residential development should front on the road with sufficient lot depth to allow a generous setback for sound and privacy. Large specimen street trees should be planted in residential areas to mitigate the scale of the street and encourage pedestrian and bicycle movement.

Policy 4.7.4: Existing east and west entries should be maintained in their current appearance, protecting views of vineyards and the surrounding hillsides wherever possible.

Open Space and Conservation

Policy 6.4.11: Integrate existing significant trees into future development.

Policy 6.4.12: Require replacement trees where existing significant trees cannot be saved.

Policy 6.4.13: Require street trees as a condition of new development.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The Land Use and Growth Management Element, Community Design Element, and Open Space Element of the 2019 General Plan provide guiding and implementing policies regarding visual resources. Compared to the 1993 General Plan, the 2019 General Plan is similar in encouraging residential development that is consistent with the design and character of the City's existing older neighborhoods (City of St. Helena 2019).

Land Use and Growth Management

Policy LU2.2: Encourage new residential development that is consistent in design, size, color, and floor area ratio (FAR) with the older residences in the neighborhood.

Policy LU2.4: Encourage the subdivision and/or development of larger parcels as Planned Unit Developments to ensure a more comprehensive and creative approach to planning the development as a single unit. This does not prohibit use of Planned Unit Developments on parcels less than three acres.

Policy LU2.5: Encourage the development of higher density housing in areas near the center of the city and close to recreation and services, such as transit, retail, and public facilities.

Policy LU2.6: Allow residential density at the higher end of the permitted range for single family development within Medium and High Density Residential Land Use designations as long as the development character of the single family area is maintained, including lot widths, orientation to street, building heights, onsite parking, traffic, and noise, among other considerations.

Policy LU2.7: Ensure safe, walkable, and bikeable residential neighborhoods and vibrant, livable streets.

Community Design

Policy CD1.1: Ensure high-quality design and construction through a robust design review process.

Policy CD1.8: Require, to the extent feasible, that all new development include underground utilities to minimize their negative visual impact. In addition, funding sources to underground electrical lines shall be sought so the undergrounding of existing overheard lines can occur over time.

Policy CD3.1: Limit building envelope sizes and require adequate side and rear setbacks to preserve the character of existing residential areas and to avoid overbuilt lots. Require future development to conform to the pattern and density of the neighboring areas. In order to complement existing town character and protect against incursion into vineyard agricultural areas.

Policy CD3.2: Ensure that new residential designs contribute positively to existing neighborhoods by complementing character and incorporating design features, such as front porches, façade articulation and stepbacks.

Policy CD3.3: Encourage the use of landscaping and tree plantings as buffers between sidewalks and residential uses. Discourage the removal of existing trees and adopt more comprehensive tree preservation standards.

Policy CD5.1: Preserve the visual and physical connection to agriculture by protecting views from streets, parks, and open spaces to vineyards, agriculture, and hillsides. Where new streets are extended adjacent to agriculture, encourage hillside, and vineyard views by maintaining agricultural activities at the road edge. Existing east and west entries should be maintained in their current appearance, protecting and improving views of vineyards and the surrounding hillsides wherever possible.

Policy CD5.C: New development shall not result in significant light, glare, and noise that could affect residents, visitors, and wildlife. Lighting shall be shielded to reduce glare and shall be cast downwards. Outdoor lighting shall occur primarily for the purpose of security and safety. Upcast lighting shall be discouraged to minimize impacts on wildlife and to retain the agricultural ambience of St. Helena. All lighting shall conform to the Lighting Zone 2 requirements of Title 24 of the California Building Code.

Open Space and Conservation

Policy OS4.1: Protect and enhance tree resources in developed and undeveloped areas. Efforts should include: adequate maintenance of street trees, requiring replacement trees where existing significant trees cannot be saved, and requiring street trees as a condition of new development.

St. Helena Zoning Ordinance

Chapter 17.164, Design Review, of the City's Zoning Ordinance addresses requirements for design review of a project. Design review is required for any new development or the modification of the exterior of structures within the City. Design review is conducted to promote qualities in the environment which bring value to the community, to foster attractiveness and functional utility within the community, to preserve the character and quality of the community's heritage, to protect public investments in the area, and to encourage a mix of uses within permissible use zones. If the Proposed Project is approved, future construction of residential structures within the Project area would require design review.

St. Helena Subdivision Ordinance

Chapter 16.32, Design Standards and Improvements, Section 130 of the City's Municipal Code protects areas such as ridges, hilltops, and other scenic areas from development that impacts scenic resources. The ordinance mandates that development must ensure adequate mitigation for protection and/or preservation of scenic resources within these areas and encourages using the form of the land and vegetation to ensure separation of building areas from scenic areas. Mitigation may require the use of plantings that are consistent and compatible with those in the area. The ordinance states that screening required for shielding of development areas should consist of natural materials of the area, including natural vegetation or land form modification to conform to the natural terrain.

The City's Municipal Code does not contain lighting requirements pertinent to the Proposed Project and does not contain any policies that address the protection of dark skies from lighting and glare impacts.

3.1.4 Impacts

Methods of Analysis

The value attached to changes in visual character is largely subjective. This EIR does not assign a judgment of "good" or "bad" to a proposed change; rather, it identifies any "substantial adverse effect," as defined below, as a significant environmental impact.

The determination of when changes to the visual environment become a substantial adverse effect is based on the following primary factors: (a) the existing scenic quality of an area; (b) the level of viewer exposure and concern regarding visual change; and (c) the level of actual visual change caused by the project as seen by a given viewer group. The overall visual sensitivity is first established based on existing visual quality, viewer exposure, and viewer concern. These factors are then considered together with the level of expected visual change or contrast and significance. Visual change is an overall measure of the alteration or change in basic visual attributes such as form, line, color, and texture as a result of the project. Thus, a substantial adverse effect can occur when a project results in high levels of visual change or obstruction of scenic views by sensitive receptors.

The California Environmental Quality Act (CEQA) does not require that privacy be addressed in an EIR because it is not an environmental issue. In addition, views of a project by a limited number of individuals do not constitute public views and are typically not evaluated under CEQA (See *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477). This case confirmed that if agency policy does not protect private views, then impacts to such private views are not significant impacts under CEQA. The most recent update to the CEQA Guidelines also clarifies that public views "are those that are experienced from a publicly accessible vantage point." (CEQA Guidelines Appendix G).

A description of the Project site and the surrounding area is derived from a site visit and photographs. The City's 1993 General Plan and 2019 General Plan were both reviewed to determine what visual elements have been deemed valuable by the community. The impact analysis focuses on the manner in which development of the Project site could alter the visual elements or features that exist in or near the Project area.

Visual simulations of what the site could look like from various viewpoints were prepared for the Proposed Project, which are referenced to prepare the impact analysis. Because the Proposed Project applicant is only requesting approval of a Tentative Subdivision Map, no building designs or architectural features are available. Therefore, the visual simulations are provided only to help the reader visualize how the Project site could change once developed. The visual simulations only depict building massing and proposed landscaping, consistent with the MR zoning and the landscape plan provided by the Proposed Project applicant. To represent future development a random mix of one and two-story buildings is included. Building heights range from approximately 18-feet for a one-story residence up to 28-feet for a two-story unit. The multi-family units were assumed to be up to 30-feet tall, the maximum building height allowed under the MR zoning. The grade of the Project site, with the exception of the multi-family housing (Lot 52), is based on the Proposed Project's grading plan. Since no grading plan was provided for the multi-family housing, all buildings and roads were placed on existing grade level. Trees are shown at an estimated 10 years growth with heights varying from 16 to 25 feet.

All tree species are shown during the summer months with full green leaves. The Proposed Project's proposed landscape plan shows a tree on the east side of Adams Street, directly in front of where the photo was taken (see Figure 2-6 in Chapter 2, Project Description). In Simulation 1, this tree was removed as it blocked views of the proposed development.

Adverse visual effects can include the loss of natural features or areas, the removal of urban features with aesthetic value, or the introduction of contrasting urban features into natural areas or urban settings. Natural features may include but are not limited to open space; native or ornamental vegetation/landscaping; topographic or geologic features; and natural water sources. The loss of natural aesthetic features or the introduction of contrasting urban features may have a local impact, or, if part of a larger landscape, may contribute to a cumulative decline in overall visual character. The vineyard present in the southwestern portion of the Project site would be considered a natural feature.

Urban features that may contribute to a valued aesthetic character or image may include: structures of architectural or historic significance or visual prominence; public plazas, art or gardens; heritage oaks or other trees or plants protected by the City; consistent design elements (such as setbacks, massing, height, and signage) along a street or district; pedestrian amenities; landscaped medians or park areas; etc. There are no urban features present on the Project site.

This analysis assumes that development of the Proposed Project would comply with the City's 1993 General Plan goals and policies and other relevant requirements; therefore, such policies and requirements are not specifically identified as mitigation.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views (public views are those experienced from a publicly accessible vantage point) of the site and its surroundings. If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Regarding the visual character and quality of the site, this site exhibits characteristics of both urban and non-urban character. The Project site is within the City's adopted Urban Limit Line, is designated for urban (medium density residential) development and is adjacent to existing residential development. The site is also adjacent to an agricultural area and the Napa River, and therefore exhibits non-urban characteristics. The City's Municipal Code includes Chapter 16.32, Design Standards and Improvements, which provides guidance for scenic resources (Section 16.32.130), aesthetics, and design, including zoning standards for height, bulk, and setbacks which are relevant to the Project and have been reviewed.

The visual impacts of the Proposed Project are evaluated within this framework, while giving consideration to the non-urban aspects of the Proposed Project location.

Threshold Criteria not Applicable to the Proposed Project

Due to the location and characteristics of the Proposed Project, certain significance criteria are not applicable and therefore, are not considered potential impacts. These criteria are addressed briefly below and are not discussed further in this document.

Scenic Resources within a State Scenic Highway

As discussed previously, although the Project site is located approximately 0.2 miles from SR 29, an eligible state scenic highway, it is not visible from the highway due to intervening trees, buildings and structures. The Project site does not contain any scenic resources such as rock outcroppings, or other significant natural or historical features that are visible from a state scenic highway and the Proposed Project would not limit views of such features from SR 29. Therefore, potential impacts to scenic resources (second significance threshold listed above) are not discussed further.

Impacts and Mitigation Measures

3.1-1: Would the Proposed Project have a substantial adverse effect on a scenic vista? This impact would be less than significant.

The City's 1993 General Plan as well as the City's recently adopted 2019 General Plan do not designate any specific scenic resources or vistas within the City for protection. The term vista generally implies an expansive view, usually from an elevated point or open area. A scenic vista is generally defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. This can include public views of agricultural open space, vineyards, creeks, and major landscape features. Scenic vistas can also provide views of significant structures and buildings.

The Proposed Project is proposing a Tentative Subdivision Map that includes lots for single-family homes as well as a 3.4-acre parcel designated for multi-family housing. Future development of the site would introduce new housing in an area that is currently undeveloped grassland with the exception of a small vineyard. Public views of the Project site are limited and generally available from the gravel maintenance road/public trail that borders the site along the north and northwest in addition to nearby public and private roads including Adams Street to the south, Starr Avenue to the southeast, and Del Rio Court to the northeast of the site. Public views from these areas include views of green grass during the early spring before the grass areas turn brown through the remainder of the year. Included are views of a mature vineyard with elevated trellises located in the south/southwest portion of the site. The Project site does not represent a scenic vista because it does not contain unique resources that would be considered a highly valued landscape enjoyed by the public, nor is the site visible from an elevated area that affords public views of a highly valued landscape. In addition, given the size and location of the Project site it does provide expansive views that constitute a vista. Views of the mountains and hillsides to the north and northwest of the site would be considered a scenic vista.

The 1993 General Plan does not contain any goals or polices specific to protecting or preserving scenic vistas, but Policy 4.5.1 of the 1993 General Plan is intended to preserve a sense of a strong connection to the surrounding agricultural open space and hillsides by maintaining views of vineyards, hillsides, creeks and major landscape features. This is essentially re-stated in Policy CD5.1 in the 2019 General Plan, which intends to "Preserve the visual and physical connection to agriculture by protecting views from streets, parks, and open spaces to vineyards, agriculture, and hillsides." The Proposed Project has been designed to protect views of the surrounding hillsides and open spaces areas through the orientation of Starr Avenue and Adams Street.

Development of the Project site would be required to comply with the City's land use, and development guidelines set forth in the City's Municipal Code. Specifically, Chapter 16.32, Design Standards and Improvements which requires scenic areas, defined as areas that contain ridges or hilltops, to include adequate mitigation for protection and/or preservation of the scenic resources, defined as intermittent, seasonal, or permanent waterways; tidal marshes or freshwater marshes; significant wildlife habitat; or significant archeological, paleontological or historic sites; undergrounding of utilities unless exempted; and grading plans that maximize retention of natural landforms such as rolling hills and areas of extensive vegetation. In addition, the Proposed Project applicant is required to comply with Chapter 17.164, Design Review, of the City's Zoning Ordinance which sets forth specific design standards for residential development. Although development of the Project site would remove a majority of the existing vineyard and open space on-site and may decrease unobstructed views of the hillsides to the north and west visible from public viewpoints, the Project site itself is not considered a scenic

vista, does not contain a highly valued landscape, nor is it located within a scenic vista identified in either the 1993 General Plan or the 2019 General Plan. Therefore, the Proposed Project would not have a substantial adverse impact on a City-designated scenic vista and the impact would be **less than significant.**

Mitigation Measures

None required.

3.1-2: Would the Proposed Project conflict with zoning and other regulations that govern scenic quality or substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict? This impact would be less than significant.

The Proposed Project includes a Tentative Subdivision Map, which, if approved, would allow for development of the Project site with single-family residential units as well as accessory dwelling units, attached multifamily residential units, roads, and landscaping. The Project site is presently undeveloped with the exception of an existing vineyard located in the southwestern portion of the site, as described in Section 3.1-2. Development of the Project site would change the undeveloped character of the site from vineyard and annual grasslands to a developed urbanized environment. Based on the Proposed Project's grading plan the proposed elevation of the site would be approximately 4 feet higher than the existing elevation of surrounding properties, primarily along the southeast boundary. Vineyards in the southwestern "panhandle" portion of the Project site would be retained, but the remainder of the existing vineyard would be removed to accommodate development.

Because the current Proposed Project entitlement is a Tentative Subdivision Map, once housing plans are submitted the Proposed Project applicant is required to comply with the City's Design Review Ordinance (Chapter 17.164 of the City's Zoning Ordinance) and undergo design review to ensure the proposed development is visually consistent and compatible with the applicable General Plan and with adjacent buildings as well as the existing environment.

It is assumed future development would comply with the building height and mass requirements of the site's MR zoning which allows buildings up to 30 feet tall, accessory buildings up to 15 feet tall, and widths not exceeding 60% of the width of the lot as measured at the front elevation (see Section 17.40.060 of the Zoning Code). The Proposed Project is consistent with the type and density of existing residential development in the Project vicinity, and is consistent with 1993 General Plan Policy 2.6.15, which encourage new residential development consistent with the scale and character of the older residential neighborhoods in the City. Under the 1993 General Plan MDR land use designation a density of between 5.1 to 12.0 dwelling units per acre (du/acre) is permitted. The Proposed Project is proposing an average density of 5.1 du/ac. In

addition, the Proposed Project is also consistent with Policy LU2.2 included in 2019 General Plan, which is similar to the previous policy in encouraging new residential development that is consistent in design and floor area ratio with older residences in the neighborhood, as well as Policy CD3.1 which limits building envelopes and requires side and rear setback to preserve the character of existing residential areas. Proposed streets also include landscape strips or medians for street trees. Appropriate landscaping is required under the City's Design Review Ordinance (Chapter 17.164) and Subdivision Ordinance (Chapter 16.32 Section 130).

The Proposed Project is within the City's Urban Limit Line and would be consistent with the type and character of residential development adjacent to the site. The design of the subdivision maintains the existing street pattern and maintains existing street views of the surrounding area, consistent with 1993 General Plan Policies 4.4.2, 4.4.4, 4.5.1 and 4.6.3, and 2019 General Plan Policy CD5.1. New and extended streets within the Project site would be consistent with existing roadway patterns, per 1993 General Plan Policy 4.4.2. Importantly, Street "B" would terminate in an easement that would maintain views of the riparian corridor and hills to the northeast (see Figure 2-4, in Chapter 2, Project Description). On-site electrical, natural gas and telecommunications connections would all be installed subsurface and no overhead facilities would be provided, consistent with 2019 General Plan Policy CD1.8 which encourages undergrounding of such services to reduce visual clutter. The Proposed Project would not conflict with the underlying MR zoning designation and is generally consistent with goals and policies that address visual resources in the City's 1993 General Plan and 2019 General Plan and the impact would be **less than significant.**

Due to the location of the Project site adjacent to the 1993 General Plan Urban Limit Line and near rural undeveloped land to the north/northwest and the Napa River to the northeast, an analysis of the how development of the site could degrade the existing visual character and affect the quality of public views of the Project site and its surroundings is included. Due to the flat topography of the City and dense development to the west and south of the Project site along with trees and other landscaping, views of the site are limited and primarily available from private property (i.e., backyards), at the terminus of Starr Avenue and Adams Street, and along Del Rio Court (a private street) within the immediate vicinity of the site. The gravel maintenance road/public trail that borders the north/northwest boundary of the site used by the public as a walking trail also provides public views of the site. Long-range views of surrounding wooded hillsides are visible from public areas surrounding the site due to its flat topography and lack of tall intervening structures. The Proposed Project would modify long-range views of existing vineyards located to the west and on the Project site as well as views of rolling hillsides which would be partially blocked by development of new residences. However, although long-range views of hillsides and views of the on-site vineyard and open space are available in the vicinity of the Project site, these views are not unique in that views of these features are available throughout the City.

To illustrate how development of the site could look and how it could affect public views and the existing visual character, visual simulations have been prepared. The visual simulations do not provide building designs or architectural features because the Proposed Project applicant is only requesting approval of a Tentative Subdivision Map at this time, thus the visual simulations only include building massing and proposed landscaping to demonstrate how the Project site could be altered with development.

A description of these viewpoints is included in the discussion below and the location of viewpoints is provided on Figure 3.1-6. These viewpoints include public views of the Project site from Starr Avenue, the extension of Adams Street, the gravel maintenance road, and from Del Rio Court (a private street). As described previously, vineyards in the southwestern "panhandle" portion of the Project site would not be removed. However, these viewpoints shown in Figure 3.1-7 through 3.1-10 include those areas where the vineyards would be removed and visual changes to the Project site would be greatest.

As shown in Figure 3.1-7, the view looking northeast from the proposed extension of Adams Street currently includes views of the existing maintenance road, a portion of the existing vineyard, open space with green grasses, evergreen trees in the background to the northeast bordering homes, and hillsides in the background to the north. The Proposed Project would change views at this viewpoint through removal of the vineyards and development of roads, residences, and new landscaping. The existing maintenance road at the forefront of this view would be replaced with a small section of paved road (Adams Street). Proposed Project streets also include landscape strips or medians for street trees which would reduce the effects of visual change and provide consistency with the surrounding neighborhoods. Hillsides in the background would still be available to the north, but trees bordering residences closer to the northeast would be blocked from view by the new residential units. While these views from the existing eastern terminus of Adams Street would change, as shown in the visual simulation provided in Figure 3.1-7, the road would form an edge between the proposed residential development and agricultural uses to the north and northwest and would preserve public views to the north and west from the existing trail, consistent with 1993 General Plan Policy 4.4.4 to leave open views of agricultural lands and hillsides, Policy 4.6.3 to maintain the edge fronting vineyards as undeveloped to preserve views, and Policy 4.7.3 to maximize open space and vineyard views near Adams Street.

SOURCE: Bing Maps 2020

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0 120 240 Feet

FIGURE 3.1-6

Visual Simulation Locations

Hunter Subdivision Project

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Existing Conditions - Looking northeast from the proposed extension of Adams Street

Visual Simulation - Looking northeast from the proposed extension of Adams Street

FIGURE 3.1-7
Simulation 1
Hunter Subdivision Project

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As shown in Figure 3.1-8, public views from the proposed extension of Starr Avenue looking north and northwest across the Project site would change from the existing undeveloped character to a developed environment. Existing views include limited views of the hillsides to the north and evergreen trees bordering residential uses farther to the east as well as green grassland that characterizes the Project site. A portion of the vineyard is also visible, with plantings arranged in a parallel fashion running northwest to southeast. The visual simulation in Figure 3.1-8 illustrates how public views could be affected by the Proposed Project due to the introduction of new buildings into the area. The extension of Starr Avenue would maintain the existing northwest view of open space and the hills in the background, although new houses would partially restrict this view from the existing road terminus, as shown in the figure. The existing vineyards would be replaced with residential homes and a paved road would replace the on-site grassland. The change to the Project site would be similar to the views presented in Figure 3.1-7 from the extension of Adams Street.

Figure 3.1-9 shows the existing and proposed views from the area looking south/southeast from the maintenance road. Existing long-range views include evergreen trees and hillsides in the distance. On the Project site itself, there is a view of a stretch of undeveloped green grassland in the foreground with vineyards visible in the distance. The Proposed Project would change public views of this area by introducing residential homes and a paved road (Street “C”) surrounded by street trees. As shown in the visual simulation in Figure 3.1-9, new housing development in the foreground would be generally consistent with the height of existing trees in the background, ensuring that views of the hillsides to the south from this area are maintained. The Tentative Subdivision map includes a setback of undeveloped space between the proposed Street “C” and the maintenance road, as shown in the visual simulation.

As shown in Figure 3.1-10, the existing view generally looking west from Del Rio Court includes views of a large grassy depression in the center of a stretch of undeveloped grassland (City’s detention basin). A few shrubs exist around the edge of this depression. There are also views of evergreen trees farther west, with buildings visible in the distance, along with hillsides in the background. Existing views of the Project site are generally limited from this area due to topography. The Proposed Project would alter the site from undeveloped grassland and vineyards to single-family homes, but views of the open space (including the City’s detention basin) in the foreground and distant hills would still be visible as shown in Figure 3.1-10. Views of distant buildings and a cluster of evergreen trees would be replaced by new homes bordered by fences.

As shown in the above visual simulations, the Proposed Project would remove a majority of the existing vineyard and open space that characterize the site and would decrease unobstructed views of the hillsides to the north and west visible from public viewpoints. However, views of agricultural and mountainous features in the City are not unique to the

Project site such that the Proposed Project would substantially impact publicly available views. As mentioned, additional discretionary approvals and Design Review would be required for specific Proposed Project components, as the current Proposed Project entitlement is only approval of a Tentative Subdivision Map. Therefore, the Proposed Project would not conflict with applicable regulations governing scenic quality or substantially degrade the existing visual character or quality of public views of the site and its surroundings and the impact to visual resources would be **less than significant**.

Mitigation Measures

None required.

3.1-3: Would the Proposed Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? This impact would be potentially significant.

Development of the Project site would introduce new sources of lighting including exterior building lights and overhead streetlights along all residential streets. Indoor and outdoor lighting associated with new residences and streetlights would increase lighting in the Project area relative to existing conditions. Additionally, sun reflecting off the windows of the proposed development could create daytime glare. However, this type of development does not include large expanses of glass or reflective building materials that can result in daytime glare conditions. Therefore, the potential for Proposed Project development to result in glare that could adversely affect daytime views in the area and result in an impact is **less than significant.**

All lighting would be required to conform to the Lighting Zone 2 requirements of Title 24 of the California Building Code. The City does not have any adopted Design Guidelines or policies in the 1993 General Plan that specify lighting be shielded and downward focused to avoid spillover light effects. However, the 2019 General Plan does include Policy CD5.C which requires new development install lights that are shielded and cast downwards, and to conform to the Lighting Zone 2 requirements of Title 24 of the California Building Code. Because new light sources would be introduced into an area that is currently undeveloped which could adversely affect nighttime views, and the City's 1993 General Plan and Zoning Ordinance do not include standards for lighting this is considered a **potentially significant impact.**

Existing Conditions - Looking north/northwest from the proposed extension of Starr Avenue

Visual Simulation - Looking north/northwest from the proposed extension of Starr Avenue

FIGURE 3.1-8
Simulation 2
Hunter Subdivision Project

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Existing Conditions - Looking south/southeast from the maintenance road

Visual Simulation - Looking south/southeast from the maintenance road

FIGURE 3.1-9
Simulation 3
Hunter Subdivision Project

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Existing Conditions - Looking west from Del Rio Court

Visual Simulation - Looking west from Del Rio Court

FIGURE 3.1-10

Simulation 4

Hunter Subdivision Project

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Mitigation Measures

Implementation of Mitigation Measure AES-1 requires lighting design guidelines be developed for the Proposed Project and that Proposed Project lighting be designed to minimize glare and light spillover. Compliance with this mitigation measure would ensure impacts related to lighting would be reduced to less than significant.

AES-1: To minimize spillover light while ensuring adequate nighttime security, the Project applicant shall prepare lighting design guidelines for the Project to be reviewed and approved by the City as part of the Design Review process. The lighting design guidelines shall include a lighting plan noting fixtures and lumens, and standards such as, lighting is to be shielded and downward focused to reduce glare and spillover light, up cast decorative lighting shall be limited to minimize effects on wildlife and to retain the rural ambience of the area, and the use of mirrored glass shall not be permitted. The lighting guidelines shall conform with Lighting Zone 2 of Title 24, Part 6, of the California Code of Regulations. The guidelines and lighting plan shall be approved as part of the Design Review application.

3.1.5 Cumulative Impacts

The cumulative analyses for aesthetics, including light and glare, is based on the buildout of development identified in the City's 1993 General Plan. While the Proposed Project is required to be evaluated under the 1993 General Plan, any changes relative to the 2019 General Plan are also evaluated for informational purposes. The geographic scope of the cumulative impact analysis for aesthetics includes the area that comprises the viewshed in which the Project site is visible, and the views visible from the Project site, which includes development in the immediately surrounding areas. As the Project site is not considered a scenic vista, this issue is not discussed as a cumulative impact.

3.1-4: Would the Proposed Project contribute to cumulative changes in the existing visual character or conflict with applicable regulations governing scenic quality? The Project's contribution would not be considerable.

As stated above, the cumulative context for aesthetics includes the area that comprises the viewshed in which the Project site is visible. There were no cumulatively significant aesthetics impacts identified in the 1993 General Plan EIR or the 2019 General Plan EIR. It was determined that the City's design review process, in combination with General Plan policies would maintain the high-quality visual character of existing and future development, would limit impacts to agricultural lands, and would primarily contain growth within the Urban Limit Line, ensuring that cumulative aesthetic impacts would be less than significant. Thus, there is no existing cumulative impact related to visual character or scenic quality.

As there is no existing cumulative impact related to this topic, the Proposed Project would not have a considerable contribution. As discussed under Impact 3.1-2, the Proposed Project would alter the existing visual character of the Project site by developing a residential subdivision on land that is currently undeveloped. However, this development would occur consistent with both the 1993 General Plan and also the 2019 General Plan 0 policies, zoning, and design review regulations to address visual quality in the City. The 2019 General Plan includes policies to minimize light and glare and a policy to encourage undergrounding of electric lines to reduce visual clutter, Policies CD5.C and CD1.8, respectively. At a localized level, there are no approved or reasonably foreseeable projects that would be visible from the Project site, with the exception of a single-family residence, accessory dwelling unit and barn under construction to the west of the Project site. With consideration of the above factors and the absence of an existing cumulative impact, the Proposed Project's contribution would not be considerable.

Mitigation Measures

None required.

3.1-5: Would the Proposed Project contribute to a cumulative increase in light and glare? The Project's contribution would not be considerable.

The cumulative context for light and glare would be other development in the surrounding area that could contribute to an increase in light and glare. As discussed under Impact 3.1-3, development of residential uses would introduce new sources of light in the area. The Proposed Project, along with existing and future development within the City, would contribute to the existing ambient light in the Project vicinity by introducing streetlights, landscape lighting, and interior and exterior buildings lights. The 1993 General Plan EIR found lighting to be a potentially significant Proposed Project impact, requiring mitigation. As undeveloped areas transition from rural to urban character, the amount of light and glare would increase due to new buildings, structures, streetlights, and vehicle lights. However, the 1993 General Plan EIR concluded that compliance with General Plan policies and the City's design review process would be adequate to mitigate cumulative aesthetic impacts. The 2019 General Plan also determined that the design review process and General Plan policies would ensure that the cumulative impact would be less than cumulatively considerable. Thus, there is no existing cumulative impact related to light and glare.

As there is no existing cumulative impact related to light and glare, the Proposed Project would not have a considerable contribution. The City does not have any adopted Design Guidelines or policies in the 1993 General Plan that specify lighting be shielded and downward focused to avoid spillover light effects. However, the 2019 General Plan does include Policy CD5.C which requires new development to be shielded and cast downwards, and to conform to the Lighting

Zone 2 requirements of Title 24 of the California Building Code. Because the Proposed Project would add new light sources to an area that is currently undeveloped, it would contribute a small increase in the overall amount of light in the City. This impact would be mitigated by Mitigation Measure AES-1 as described above under Impact 3.1-3, making the Proposed Project consistent with Policy CD 5.C. With consideration of the above factors and the absence of an existing cumulative impact related to light and glare, the Proposed Project's contribution would not be cumulatively considerable.

Mitigation Measures

See Mitigation Measure AES-1. Compliance with Mitigation Measure AES-1 mitigates this impact and no additional mitigation is required.

3.1.6 References

Caltrans (California Department of Transportation). 2018. California Scenic Highway Mapping System: Napa County. Accessed November 12, 2018. Available at: http://www.dot.ca.gov /hq/LandArch/16_livability/scenic_highways/index.htm.

City of St. Helena. 1993. City of St. Helena 1993 General Plan. September 18, 1993.

City of St. Helena. 2010. St. Helena General Plan Update. August 2010. Prepared by ESA.

City of St. Helena. 2018. St. Helena General Plan Update 2040, Draft Environmental Impact Report. SCH# 2010042001. October 23, 2018.

City of St. Helena. 2019. City of St. Helena General Plan Update 2040. June 2019.

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3.2 AGRICULTURE AND FORESTRY RESOURCES

3.2.1 Introduction

This section describes agricultural resources, including farmland and forestland, and discusses applicable federal, state, and regional regulations pertaining to agriculture and forestry resources. This section evaluates the potential effects on agricultural and forestry resources associated with development of the proposed Hunter Subdivision Project (Proposed Project).

Comments received in response to the Notice of Preparation included concerns regarding removal of the existing vineyard on the Project site, loss of Prime Farmland and farmland/agricultural resources and potential mitigation to address loss of farmland, and impacts on adjacent vineyard soils and crops due to homeowner pesticide or fertilizer use. Impacts related to homeowner use of pesticides, fertilizer, and other household hazardous wastes are addressed in detail in Section 3.8, Hazards and Hazardous Materials. As stated in Section 3.8, households typically use small amounts of household hazardous wastes at quantities too small to result in a significant hazard to the public or the environment. Thus, this issue as it relates to agricultural resources is not discussed in this section. A copy of the Notice of Preparation and comments received is included in Appendix A.

Information referenced to prepare this section includes the California Department of Conservation Farmland Mapping and Monitoring Program and City planning documents (including the 1993 General Plan and the 2019 General Plan[1]). The California Land Evaluation and Site Assessment (LESA) Model was used to assess potentially significant effects on agricultural lands and the model outputs are provided in Appendix B. Other sources consulted are listed in Section 3.2.6, References.

3.2.2 Environmental Setting

Farmland

Agriculture has historically been a part of the City of St. Helena (City), with the City's agricultural land primarily consisting of vineyards due to its deep alluvial soils that are conducive to growing wine grapes (City of St. Helena 1993). Within the City, agricultural uses, including wineries, account for 916 acres (25%) of the total land area. Agricultural areas are primarily located adjacent to the City's Urban Limit Line (City of St. Helena 2018). The majority of the Project site contains undeveloped land consisting of nonnative grasses, with the exception of a small vineyard in the southwestern portion of the site that occupies approximately 6.8 acres or 40% of the Project site along with less than an acre of vineyards located in the "panhandle" portion of

[1] The "General Plan Update 2040," adopted in 2019, is referred to in this EIR as the "2019 General Plan."

the site. There are no forest resources present on the site but there are some trees located adjacent to the southeast boundary of the Project site. The elevation of the Project site ranges from approximately 230 feet above mean sea level on its southern edge to approximately 212 feet above mean sea level on its northern edge. Lands to the north of the Project site, between Library Lane and Silverado Trail North are primarily agricultural, with vineyards located beyond the proposed Adams Street extension and the levee along the Napa River. The Napa River is located approximately 0.1 miles to the north/northeast of the Project site. Single-family and multi-family residential development is located to the south and southeast, and office uses are located immediately adjacent to the site's western boundary at the terminus of Adams Street. A gravel maintenance road/public trail borders the site along the north/northwest and a city storm water detention basin borders the site to the north/northeast.

The Project site is designated as high density housing in the 1975 St. Helena General Plan, as Medium Density Residential (MDR) in the City's 1993 General Plan (City of St. Helena 1993), and as MDR in the current 2019 General Plan (City of St. Helena 2019). Land designated as Medium Density Residential (MDR) typically is for residential purposes, and provides for single-family detached and attached homes, secondary residential units, public and semi-public uses, and similar and compatible uses. The zoning designation for the Project site is also Medium Density Residential (MR) (City of St. Helena 2018).

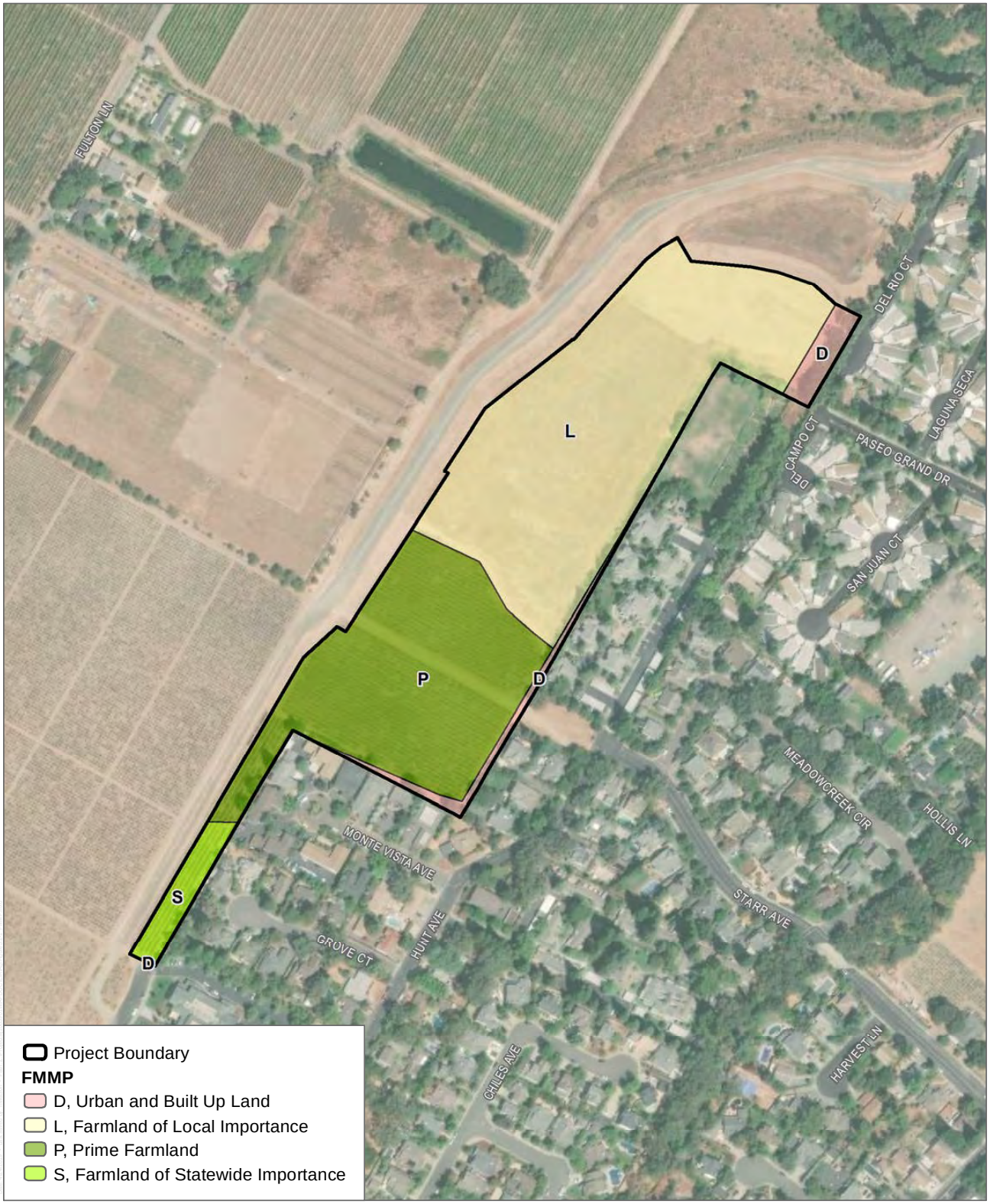
Farmland Classification

The California Department of Conservation (DOC), Division of Land Resources Protection, operates the Farmland Mapping and Monitoring Program (FMMP). The FMMP maps the state's farmland resources and monitors the conversion of farmland to (and from) other land uses. As shown in Figure 3.2-1, FMMP Classification, the FMMP categorizes the eastern portion of the Project site as Farmland of Local Importance. The western portion of the Project site is predominantly designated as Prime Farmland, with portions of Farmland of Statewide Importance and Urban and Built-Up Land in the westernmost area of the Project site. Table 3.2-1 provides acreages for the various farmland categories within the site.

Table 3.2-1
Important Farmland

Farmland Mapping and Monitoring Program Category	Acreage
Prime Farmland	5.8
Farmland of Statewide Importance	0.6
Farmland of Local Importance	9.0
Urban and Built Up Land (including existing roadways)	0.8
Total	16.2

Source: DOC 2017.
Note: The acreage/boundaries between the parcel data information and Napa County GIS data results in a 0.7-acre discrepancy.



SOURCE: Bing Maps 2019; CA Department of Conservation 2016

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0 150 300 Feet

FIGURE 3.2-1
FMMP Classification
Hunter Subdivision Project

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Land to the north and east of the Project site is designated as Prime Farmland, and land to the northwest of the site is designated Farmland of Statewide Importance. The FMMP categories relevant to the Project site are defined as follows:

Prime Farmland

"Prime Farmland" is farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance

Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

Farmland of Local Importance

Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Urban and Built-up Land

Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Soil Types

The United States Department of Agriculture Natural Resources Conservation Service (NRCS) conducts soil surveys and creates maps representing the location and type of soil in order to aid in agricultural, conservation, and land use decisions. The NRCS identifies the following soils as occurring on the Project site (USDA 2018):

- Bale clay loam, 0 to 2% slopes
- Bale clay loam, 2 to 5% slopes
- Cole silt loam, 0 to 2% slopes
- Cortina very gravelly loam, 0 to 5% slopes, moist

The Storie Index is a rating system that is used to classify soils that could be used for irrigated agriculture in California. The Storie Index Rating system ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production to Grade 6 soils (less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. Soil units are also rated based on four properties: degree of soil profile development, texture of the surface layer, steepness of slope, and drainage class, landform, erosion class, flooding and ponding frequency and duration, soil pH, soluble salt content as measured by electrical conductivity, and sodium adsorption ratio (USDA 2018). The Storie Index Ratings for soils on the Project site are shown in Table 3.2-2.

Table 3.2-2
Storie Index Ratings for On-Site Soils

Soil Type	Storie Index Rating	Percent of Property Area
Bale clay loam, 0 to 2% slopes	Grade 2 – Good	22.3%
Bale clay loam, 2 to 5% slopes	Grade 3 – Fair	53.2%
Cole silt loam, 0 to 2% slopes	Grade 2 – Good	21.0%
Cortina very gravelly loam, 0 to 5% slopes, moist	Grade 3 – Fair	3.5%

Source: USDA 2018.

As shown in Table 3.2-2, the majority of the Project site, approximately 57%, contains soils that are classified as fair for irrigated agricultural production. The remainder of the site, approximately 43% contains soil units that are classified as good for irrigated agricultural production.

The Project site is not under a Williamson Land Act contract and does not contain any forest or timberland and is not zoned for forest land, timberland, or timberland production.

3.2.3 Regulatory Setting

Federal Regulations

Federal agencies must consider the impacts to Prime Farmland resulting from their actions under the Farmland Protection Policy Act (7 USC Section 4201 et seq.). This requirement does not apply to the Proposed Project.

State Regulations

The following state regulations pertaining to agricultural resources would apply to the Proposed Project.

California Civil Code Section 3482.5

Section 3482.5 of the California Civil Code specifies that no agricultural activity, operation, or facility that is conducted properly in the same location for more than three years shall be considered a nuisance to new uses in its vicinity, unless it was considered a nuisance since the time it began. This regulation also applies to activities of a district agricultural association.

Williamson Act

The Williamson Act (California Government Code Section 51200), also known as the California Land Conservation Act of 1965, is the premier legislation for the protection of agricultural land in California. The act underscores the importance of preserving a maximum amount of the state's agricultural land as an economic asset that provides for the generation of adequate and nutritious food resources for the nation and state into the future. The Williamson Act operates through 10-year contracts with agricultural landowners that confirm that agricultural land is being preserved as the land's best use while providing a substantial property tax break for the landowner. The property's agricultural value is assessed and the landowner under contract is dismissed from property taxes according to the property's urban development potential. The Project site does not contain any land under a Williamson Act contract.

Farmland Mapping and Monitoring Program

The FMMP is a non-regulatory program implemented by the DOC, Division of Land Resource Protection. Government Code Section 65570 mandates the FMMP to biennially report to the Legislature on the conversion of farmland and grazing land, and to provide maps and data to local government and the public. FMMP produces Important Farmland Maps, which are a hybrid of resource quality (soils) and land use information, based on the prior federal NRCS program. Land is classified into eight categories. Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are considered "Important Farmland" for the purposes of the California Environmental Quality Act (CEQA) (the conversion of which may be a significant impact).

Local Regulations

The following local/regional regulations pertaining to agriculture would apply to the Proposed Project.

City of St. Helena 1993 General Plan

The Open Space and Conservation Element and Land Use and Growth Management Element of the City of St. Helena 1993 General Plan provides guiding policies regarding agricultural and forestry resources, including the following:

Growth Management

Policy 2.6.5: Encourage the continuation of agricultural and low-intensity uses adjacent to the Urban Limit Line.

Agriculture

Policy 2.6.58: Promote the continuation of agricultural activities within and adjacent to the City.

Policy 2.6.59: Protect prime agricultural land and prime vineyard land from premature and/or unnecessary urban encroachment.

Policy 6.3.1: Maintain agriculture as the mainstay of the local economy by preserving agriculturally-designated lands as an invaluable and irreplaceable open space resource.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The Open Space and Conservation Element and Land Use and Growth Management Element of the City of St. Helena 2019 General Plan provides guiding policies regarding agricultural and forestry resources, including the following:

Growth Management

Policy LU1.3: Support agricultural and low-intensity uses beyond the Urban Limit Line.

Agriculture

Policy LU5.1: Discourage conversion of existing farmland to non-agricultural uses.

Policy LU5.2: Encourage the County to continue to promote agricultural uses and to limit further development in unincorporated areas surrounding the city.

Policy LU5.3: Strictly limit development on properties existing at the time of the adoption of this General Plan that are designated as agricultural land.

St. Helena Municipal Code

Chapters 17.32 through 17.60 and 17.68 of the St. Helena Municipal Code protect agricultural operations on agricultural land within the City by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. The City's municipal code contains the following "right-to-farm" provision in the regulations for each nonagricultural zoning district:

> Property owners within this district shall recognize that there exists a right to farm properties within the district and in the vicinity of the district. There is a good faith expectation that no complaints will occur regarding legal normal agricultural activities on properties in the district or in the vicinity of the district. Such activities may include day or night disbursement of chemicals, and creation of dust, noise, or fumes.

In addition, Municipal Code Section 17.04.100 (Cultivated agricultural use within established zoning districts) specifies the following:

> It is the policy of the city as expressed in the general plan to recognize and provide for cultivated agriculture within the city limits. Cultivated agricultural uses are permitted within the A-20 zoning district and regulated by use permit in the woodlands and watershed zoning district. It is the intent of the city to allow cultivated agricultural uses including, but not limited to, farming, horticulture, floriculture and viticulture, but excluding animal husbandry and livestock farming, in all zoning districts within the urban limit line prior to establishment of urban land uses. Allowing cultivated agriculture within the urban limit line shall not compromise the long-term objective of providing for designated urban uses. Water used for cultivated agriculture shall be in conformance with Section 13.04.100 of this code.

3.2.4 Impacts

Methods of Analysis

The LESA Model was used to evaluate potential impacts to agricultural land resulting from development of the Project site. The LESA Model is a point-based approach for rating the relative importance of agricultural land resources based upon specific measurable features. The LESA was first developed in 1981 by the NRCS to provide an objective rating system for the agricultural suitability of land. The development of California's LESA Model was the result of Senate Bill 850 (Chapter 812/1993), which charged the Resources Agency, in consultation with the Governor's Office of Planning and Research, with preparing an amendment to Appendix G of the CEQA Guidelines concerning agricultural lands. This model ensures a quantitative and

consistent approach to determining potentially significant impacts to agricultural resources during the environmental review process. The LESA Model evaluates various characteristics of a project site, including soil resource quality, project size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. These factors are rated, weighted, and combined to produce a single numeric score that can be used to determine significance. The final scoring is based on a scale of 100 points. Thresholds for significance are based on both the total LESA score as well as the component Land Evaluation (LE) and Site Assessment (SA) subscores (DOC 1997). Table 3.2-3 includes the LESA Model scoring thresholds. A copy of the model outputs is included in Appendix B.

Table 3.2-3
LESA Model Scoring Thresholds

Scoring	Significance
0 to 39 Points	Not Considered Significant
40 to 59 Points	Considered Significant only if LE and SA subscores are each greater than or equal to 20 points
60 to 79 Points	Considered Significant unless either LE or SA subscore is less than 20 points
80 to 100 Points	Considered Significant

Source: DOC 1997.

The LE considers the quality of the soils on a project site, as measured by Land Capability Classification and the Storie Index of the soils. The Land Capability Classification indicates the suitability of soils for most kinds of crops. Groupings are made according to the limitations of the soils when used to grow crops, and the risk of damage to soils when they are used in agriculture. The Storie Index provides a numeric rating (based upon a 100-point scale) of the relative degree of suitability or value of a given soil for intensive agriculture. The rating is based upon soil characteristics only. The NRCS Web Soil Survey was used to determine soil types and properties on the Project site.

The SA considers the size of a project site, the availability of water for agricultural use, the amount of active agricultural uses around the project site, and the amount of protected land (including Williamson Act contracts, publicly owned lands used for open space or recreational uses, and easements which restrict urban development). The SA portion was primarily based on City, County of Napa (County), and other public GIS data and the DOC FMMP, and the well report filed with the Department of Water Resources for the on-site groundwater well. The Proposed Project setting was developed by reviewing FMMP data and Williamson Act contract information from the DOC. This review was supplemented with field observations (as part of the biological resource fieldwork).

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact could occur if development of the Proposed Project would do any of the following:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

As shown in Table 3.2-3, the loss of agricultural resources would be considered significant only if the individual LE and SA subscores are each greater than or equal to 20 points.

Significance Threshold Criteria not Applicable to the Proposed Project

Due to the location and characteristics of the Proposed Project, certain significance criteria are not applicable and therefore, are not considered potential impacts. These criteria are addressed briefly below and are not discussed further in this Environmental Impact Report.

Conflict with Williamson Act Contract/Conflict with Lands Zoned Forest Land or Timberland/Loss or Conversion of Forest Land

The Project site does not include forest lands, land zoned for agricultural use, or timberland, nor does the Project site contain an active Williamson Act contract; therefore, there would be no impact to conflicting with existing zoning for agricultural use, forest or timberland resources, or removal of a Williamson Act contract. Thus, these issues (second, third and fourth significance threshold listed above) are not further evaluated.

Impacts and Mitigation Measures

3.2-1: Would the Proposed Project convert Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? This impact would be less than significant.

The Project site includes 5.8 acres of Prime Farmland and 0.6 acres of Farmland of Statewide Importance (as defined by the FMMP) that would be converted to urban uses as a result of Proposed Project implementation (see Table 3.2-1). The site also includes land designated as Farmland of Local Importance and Urban Land. Due to the presence of 6.4 acres of "Important Farmland," the LESA Model (Appendix B) was used to evaluate the quality of agricultural lands on the Project site to determine the significance of potential Proposed Project impacts. As described above, under Methods of Analysis, the LESA Model is used to provide a quantitative and consistent approach to determining potentially significant impacts to agricultural resources during the environmental review process. The model results in individual scores for the LE and SA factors, along with a total score out of 100 possible points.

The dominant soil type on the Project site is Bale clay loam (see Section 3.6, Geology and Soils), which has a relatively high Land Capability Classification and average to above-average Storie Index. This resulted in a moderate LE score. The relatively small size of the Project site and the amount of urban land near the site resulted in a low SA score, despite the relatively good availability of water (due to the on-site irrigation well). The model returned an LE score of 35 and a SA score of 13.8 for a total score of 48.8 (see Appendix B). As shown in Table 3.2-3, the loss of agricultural resources would be considered significant only if the individual LE and SA subscores are each greater than or equal to 20 points. Therefore, impacts associated with the removal of prime farmland and farmland of statewide importance would be **less than significant.**

Mitigation Measures

None required.

3.2-2: Would the Proposed Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use? This impact is less than significant.

Conversion of the Project site to developed uses may impact nearby agricultural operations to the north, northeast and northwest. Existing agricultural operations may become constrained, due to concerns with the effects of dust, odor, noise, and pesticide-use from future Proposed Project residents. In addition, urban effects, such as vandalism, garbage, and predation by domestic animals (cats and dogs) can also impact agricultural uses. These are often identified as "edge effects," as the urban edge interacts with adjacent agricultural activities.

There is agricultural land to the north and northwest of the Project site, within the City boundaries, that is currently in active agricultural production. This land is designated as Prime Farmland and Farmland of Statewide Importance (FMMP 2017). The City's Municipal Code (Chapters 17.32 through 17.60 and 17.68) includes provisions that require property owners adjacent to agricultural operations to recognize that adjacent properties have the right to farm and that there is a good faith expectation that the adjacent neighbors would not complain to the City regarding legal normal agricultural activities, including day or night disbursement of chemicals, and creation of dust, noise, or fumes. This protects agricultural operations and uses within the vicinity of the Project site. There is an existing trail adjacent to a gravel maintenance road also used by the public as an informal trail which borders the site along the north/northwest. No modifications to the trail or maintenance road are proposed and these existing uses would help provide a buffer between adjacent agricultural activities and the Project site. The development of residences on the Project site would not directly or indirectly result in conversion of properties under active agriculture to the north and northwest to non-agricultural uses. Therefore, impacts would be **less than significant.**

Mitigation Measures

None required.

3.2.5 Cumulative Impacts

The effects of the Proposed Project, when considered with other projects in the region, could result in a cumulative impact to the loss of farmland resources. The cumulative context for the analysis of agricultural resources is Napa County.

3.2-3: Would the Proposed Project contribute to cumulative impacts associated with the loss or conversion of existing agricultural resources? The Project would result in a less than considerable contribution.

As stated in the Napa County General Plan, agriculture is and will continue to be the primary land use in Napa County (Napa County 2008). According to the DOC's FMMP, the County has approximately 254,543 acres of agricultural land, as of 2016. Of this, the County supports 30,619 acres of "Prime Farmland," 9,593 acres of "Farmland of Statewide Importance," 16,803 acres of "Unique Farmland," 18,326 acres of "Farmland of Local Importance," and 179,202 acres of "Grazing Land." Based on the land use conversion table prepared by the DOC, between 2014 and 2016, 35 acres of the 30,654 acres of County's Prime Farmland were converted to urban and built-up land. However, overall, Important Farmland in the County increased by 149 acres (DOC 2016). This is likely due to lands being converted to vineyards.

The City contains approximately 956 acres of land designated as Prime Farmland, 284 acres of Farmland of Statewide Importance, 53 acres of Unique Farmland, and 33 acres of Farmland of Local Importance. There is no land designated as Grazing Land within the City (City of St. Helena 2018). The Project site contains less than 6 acres of Prime Farmland and less than 1 acre of Farmland of Statewide Importance.

As described in Impact 3.2-1, the Proposed Project would not be considered to have a potential impact on agricultural resources. In addition, the Project site has long been designated for urban use. The St. Helena 1993 General Plan and also the current 2019 General Plan contains policies regarding the preservation of agricultural lands. For example, the City maintains large parcels for agricultural use and limits residential and commercial development within the Urban Limit Line to parcels already designated for such uses. The Proposed Project is not compromising the principles of urban-centered growth and agricultural preservation since the site has been designated for residential development and is located within the City limits. In addition, Countywide, conversion of agricultural lands in the County is decreasing. Therefore, the Proposed Project's contribution to a cumulative effect is not considerable, and cumulative impacts would be **less than significant.**

Mitigation Measures

None required.

3.2.6 References

DOC (California Department of Conservation). 2017. Farmland Mapping and Monitoring Program. Accessed October 8, 2018. https://maps.conservation.ca.gov/DLRP/CIFF/.

DOC. 2016. Table A-21: Napa County 2014-2016 Land Use Conversion Table.

DOC. 1997. California Agricultural Land Evaluation and Site Assessment Model Instruction Manual.

USDA (United States Department of Agriculture). 2018. Web Soil Survey. Accessed August 6, 2018. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

City of St. Helena. 1993. *City of St. Helena 1993 General Plan*. September 28, 1993.

City of St. Helena. 2018. St. Helena General Plan Update 2040 Draft Environmental Impact Report SCH# 2010042001. October 23, 2018.

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Napa County. 2008. Napa County General Plan. June 3, 2008.

3.3 AIR QUALITY

3.3.1 Introduction

This section of the Draft Environmental Impact Report presents potential air quality impacts of the proposed Hunter Subdivision Project (Proposed Project), which includes the environmental setting and existing air quality conditions, regulatory framework, potential short-term and long-term air quality impacts, and proposed measures to mitigate any identified significant impacts. The analysis and findings are based on the air quality emissions modeling, which can be found in Appendix C.

No comments were received that raised concerns regarding air quality in response to the Notice of Preparation. A copy of the Notice of Preparation and comments received is included in Appendix A.

Information contained in this section is based on Proposed Project plans, the California Emissions Estimator Model (CalEEMod) to estimate Proposed Project emissions, the Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act Air Quality Guidelines (BAAQMD 2017a), and the Spare the Air: Cool The Climate – Final 2017 Clean Air Plan (BAAQMD 2017b). Other sources consulted are listed in Section 3.3.6, References.

3.3.2 Environmental Setting

The City of St. Helena (City) is located in the County of Napa (County), within the boundaries of the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB encompasses all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, and the southern portions of Solano and Sonoma counties.

Air pollutants are emitted by a variety of sources, including mobile sources (vehicles), area sources (fireplaces, consumer product use, architectural coatings, and landscape maintenance equipment), energy sources (natural gas combustion), and stationary sources (generators or other stationary equipment). Some air pollutants need to be examined at the local level, and others are predominately an issue at the regional level. For instance, ozone (O_3) is formed in the atmosphere in the presence of sunlight by a series of chemical reactions involving oxides of nitrogen (NO_x) and reactive organic gas (ROG, also termed volatile organic compounds [VOCs]). Because these reactions can occur many miles from the source, O_3 is typically analyzed at the regional level (i.e., in the Air Basin) rather than the local level. On the other hand, air pollutants such as particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), carbon monoxide (CO), and toxic air contaminants (TACs) are a potential concern in the immediate vicinity of the pollutant source because the pollutants are emitted

directly by or are formed close to the source. Therefore, the study area for emissions of PM_{10}, $PM_{2.5}$, CO, and TACs is the local area near the source, such as in the vicinity of the Project site, and the study area for regional pollutants such as NO_x and ROGs is the entire SFBAAB.

Regional Climatology

Air quality is a function of the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality.

The climate of the SFBAAB is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the west coast of North America. During winter, the Pacific high-pressure system shifts southward, allowing more storms to pass through the region. During summer and early fall, when few storms pass through the region, emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as O_3, and secondary particulates, such as nitrates and sulfates.

The Project site is located in the Napa Valley climatological subregion. Specific topographic and climatological conditions for the subregion are described in the BAAQMD California Environmental Quality Act Air Quality Guidelines (BAAQMD 2017a). The Napa Valley is bordered by relatively high mountains. With an average ridge line height of about 2,000 feet, with some peaks approaching 3,000 to 4,000 feet, these mountains are effective barriers to the prevailing northwesterly winds. The Napa Valley is widest at its southern end and narrows in the north. During the day, the prevailing winds flow up valley from the south about half of the time. A strong up valley wind frequently develops during warm summer afternoons, drawing air in from the San Pablo Bay. Daytime winds sometimes flow down valley from the north. During the evening, especially in the winter, down valley winds often occur. Wind speeds are generally low, with almost 50% of the winds less than 4 miles per hour. Only 5% of the winds are between 16 and 18 miles per hour, representing strong summertime up valley winds and winter storms (BAAQMD 2017a).

The greatest precipitation in the City occurs from October to April, during which time the rainfall averages 2–7 inches per month. The average annual precipitation is 34.61 inches. The City has a mild climate with an annual average temperature of 75°F. The coolest months of the year are typically December through February, with an annual average low of 36°F. The warmest months are typically June through September, with an annual average high of 89°F. Prevailing wind direction in the City (as measured at the St. Helena station, approximately 0.42 miles southwest of the Project site) is from the west (WRCC 2019).

The air pollution potential in the Napa Valley could be high if there were sufficient sources of air contaminants nearby. Summer and fall prevailing winds can transport O_3 precursors northward from the Carquinez Strait Region to the Napa Valley, effectively trapping and concentrating the pollutants when stable conditions are present. The local upslope and downslope flows created by the surrounding mountains may also recirculate pollutants already present, contributing to buildup of air pollution. High O_3 concentrations are a potential problem to sensitive crops such as wine grapes, as well as to human health. The high frequency of light winds and stable conditions during the late fall and winter contribute to the buildup of particulate matter from motor vehicles, agriculture, and woodburning in fireplaces and stoves.

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, nitrogen dioxide (NO_2), CO, sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. These pollutants, as well as TACs, are discussed in the following paragraphs.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly NO_x and ROG. The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric ozone) and at Earth's surface in the lower atmosphere (tropospheric ozone).[2] The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse

1 The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2018a), the California Air Resources Board's (CARB) "Glossary" (CARB 2019a), and CARB's "Fact Sheet: Air Pollution Sources, Effects and Control" (CARB 2009).

2 The troposphere is the layer of Earth's atmosphere nearest to the surface of Earth, extending outward approximately 5 miles at the poles and approximately 10 miles at the equator.

health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013).

Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in and cause shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. While there are relatively few studies of O_3's effects on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2019b).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x, which includes NO_2 and NO, plays a major role, together with ROG, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources (such as electric utility and industrial boilers).

A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards (AAQS) for NO_2, results from controlled human exposure studies that show that NO_2

exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher compared to lower levels of exposure. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2019c).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, and light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2019d).

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near

large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 parts per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. The elderly and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2019e).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and ROG.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause

lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. PM_{10} tends to collect in the upper portion of the respiratory system, whereas $PM_{2.5}$ is small enough to penetrate deeper into the lungs and damage lung tissue. Suspended particulates also produce haze and reduce regional visibility and damage and discolor surfaces on which they settle.

A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24 hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and world-wide based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits. (CARB 2017).

Long-term (months to years) exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2017).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ described above.

Reactive Organic Gases. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as ROG. Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of ROG result from the formation of O_3 and its related health effects. High levels of ROG in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for ROG as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air

Toxics “Hot Spots” Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the Legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70th the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2016a). DPM is typically composed of carbon particles (“soot,” also called black carbon, or BC) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016a). The CARB classified “particulate emissions from diesel-fueled engines” (i.e., DPM; 17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016b). Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person’s reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population

and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution–sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). Sensitive receptors are groups of individuals, including children, the elderly, the acutely ill, and the chronically ill, that may be more susceptible to health risks due to chemical exposure, and sensitive-receptor population groups are likely to be located at hospitals, medical clinics, schools, playgrounds, childcare centers, residences, and retirement homes (BAAQMD 2017a). The closest sensitive receptors are single-family residences located approximately 20 feet east of the Project site.

Regional and Local Air Quality Conditions

San Francisco Bay Area Air Basin Designation

An area is designated in attainment when it is in compliance with the National Ambient Air Quality Standards (NAAQS) and/or California Ambient Air Quality Standards (CAAQS). These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare.

The primary pollutants of concern in SFBAAB are ozone, PM_{10}, and $PM_{2.5}$ because SFBAAB is designated nonattainment for these pollutants by EPA and CARB. The SFBAAB is designated as nonattainment for the 8-hour NAAQS for O_3 and is also nonattainment for $PM_{2.5}$. The SFBAAB is designated as attainment for all other criteria pollutants under the NAAQS. The SFBAAB is currently designated as nonattainment for O_3, both 1-hour and 8-hour, PM_{10} and $PM_{2.5}$ under the CAAQS. Table 3.3-1 depicts the current attainment status within the air basin with respect to the NAAQS and CAAQS, as well as the attainment classifications for criteria pollutants.

Table 3.3-1
State and Federal Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	California Standards[a]		National Standards[b]	
		Standard	*Attainment Status*	*Standard*	*Attainment Status*
Ozone (O_3)	1 hour	0.09 ppm	N	NA	NA
	8 hour	0.07 ppm	N	0.070 ppm	N/Marginal[c]
Carbon Monoxide (CO)	1 hour	20 ppm	A	35 ppm	A
	8 hour	9 ppm	A	9 ppm	A
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	A	0.100 ppm	U
	Annual	0.030 ppm	NA	0.053 ppm	A
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm	A	0.075 ppm	A
	24 hour	0.04 ppm	A	0.14 ppm	A
	Annual	NA	NA	0.03 ppm	A
Particulate Matter (PM_{10})	24 hour	50 µg/m^3	N	150 µg/m^3	U
	Annual	20 µg/m^3	N	NA	NA
Fine Particulate Matter ($PM_{2.5}$)	24 hour	NA	NA	35 µg/m^3	N[d]
	Annual	12 µg/m^3	N	12 µg/m^3	U/A[e]
Sulfates	24 hour	25 µg/m^3	A	NA	NA
Lead	30 day	1.5 µg/m^3	NA	NA	A
	Cal. Quarter	NA	NA	1.5 µg/m^3	A
	Rolling 3-Month Average	NA	NA	0.15 µg/m^3	U/A
Hydrogen Sulfide	1 hour	0.03 ppm	U	NA	NA
Visibility-Reducing Particles	8 hour	See Note "f"	U	NA	NA

Source: BAAQMD 2017c; CARB 2018 (state); EPA 2018b (federal).

Notes: µg/m^3 = micrograms per cubic meter; mg/m^3= milligrams per cubic meter; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns; ppm = parts per million by volume; A = Attainment; N = Nonattainment; U = Unclassified; NA = Not Applicable (no applicable standard)

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements can be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average.

b National standards shown are the "primary standards" designed to protect public health. NAAQS (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.

d On January 9, 2013, the EPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard. This EPA rule suspends key State Implementation Plan requirements as long as monitoring data continues to show that the Bay Area attains the standard.

Despite this EPA action, the Bay Area will continue to be designated as "nonattainment" for the national 24-hour $PM_{2.5}$ standard until such time as the BAAQMD submits a "redesignation request" and a "maintenance plan" to EPA, and EPA approves the proposed redesignation.

e In December 2012, the EPA strengthened the annual $PM_{2.5}$ NAAQS from 15.0 to 12.0 µg/m³. In December 2014, EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

f Statewide visibility reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70%. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The Jefferson Avenue monitoring station, located at 2552 Jefferson Avenue, Napa, CA 94558, is the nearest air quality monitoring station to the Project site, located approximately 16.5 miles southeast from the Project site. The most up-to-date air quality data from 2016 to 2018 for O_3, NO_2, CO, PM_{10}, and $PM_{2.5}$ from the Jefferson Avenue monitoring station are provided in Table 3.3-2. The data collected at this station is considered generally representative of the air quality experienced in the Project vicinity. The number of days exceeding the ambient air quality standards is also shown in Table 3.3-2.

Table 3.3-2
Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2016	*2017*	2018	2016	2017	2018
Ozone (O_3)										
Napa-Jefferson Avenue	ppm	Maximum 1-hour concentration	State	0.09	0.080	0.098	0.047	0	1	0
	ppm	Maximum 8-hour concentration	State	0.070	0.068	0.084	0.043	0	2	0
			Federal	0.070	0.067	0.084	0.042	0	2	0
Nitrogen Dioxide (NO_2)										
Napa-Jefferson Avenue	ppm	Maximum 1-hour concentration	State	0.18	0.039	0.052	0.039	0	0	0
			Federal	0.100	0.039	0.0526	0.039	0	0	0
	ppm	Annual concentration	State	0.030	0.007	0.007	ND	—	—	—
			Federal	0.053	—	—	—	—	—	—

Table 3.3-2
Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2016	*2017*	2018	2016	2017	2018
Carbon Monoxide (CO)										
Napa-Jefferson Avenue	ppm	Maximum 1-hour concentration	State	20	—	—	—	—	—	—
			Federal	35	2.2	5.6	1.6	0	0	0
	ppm	Maximum 8-hour concentration	State	9.0	—	—	—	—	—	—
			Federal	9	1.5	4.7	1.1	0	0	0
Coarse Particulate Matter (PM_{10})[a]										
Napa-Jefferson Avenue	µg/m³	Maximum 24-hour concentration	State	50	33.0	ND	ND	ND (0)	ND (0)	ND (0)
			Federal	150	32.2	ND	ND	ND (0)	ND (0)	ND (0)
	µg/m³	Annual concentration	State	20	ND	ND	ND	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[a]										
Napa-Jefferson Avenue	µg/m³	Maximum 24-hour concentration	Federal	35	24.3	199.1	30.2	0.0 (0)	13.3 (13)	ND (0)
	µg/m³	Annual concentration	State	12	24.3	199.1	30.2	—	—	—
			Federal	12.0	8.5	13.7	ND	—	—	—

Sources: CARB 2019f; EPA 2019.

Notes: — = data not available; µg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value; ppm = parts per million Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.

Exceedances of federal and state standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM_{10}, nor is there a state 24-hour standard for $PM_{2.5}$.

Napa-Jefferson Avenue Monitoring Station is located at 2552 Jefferson Avenue, Sebastopol, California 94558.

[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

3.3.3 Regulatory Setting

The following federal, state and regulations pertaining to air quality would apply to the Proposed Project.

Federal Regulations

Clean Air Act

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the standards within mandated timeframes. Each State Implementation Plan is developed through a public process, formally adopted by the state, and submitted by the Governor's designee to the U.S. EPA. The Clean Air Act requires the U.S. EPA to review each plan and any plan revisions and to approve the plan or plan revisions if consistent with the Clean Air Act.

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. HAPs include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

State Regulations

California Clean Air Act

The California Clean Air Act requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB,

which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS air quality standards are presented in Table 3.3-3.

Table 3.3-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	annual arithmetic mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[g]	—
	annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	annual arithmetic mean	20 μg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 μg/m³	Same as Primary Standard
	annual arithmetic mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[j,k]	30-day average	1.5 μg/m³	—	—
	calendar quarter	—	1.5 μg/m³ (for certain areas)[k]	Same as Primary Standard
	rolling 3-month average	—	0.15 μg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m³)	—	—

Table 3.3-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m^3)	—	—
Sulfates	24 hours	25 µg/m^3	—	—
Visibility-reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016c.

Notes: µg/m^3 = micrograms per cubic meter; mg/m^3= milligrams per cubic meter; ppm = parts per million by volume; O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[ff] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, a subset of which have carcinogenic and noncarcinogenic toxicity criteria established pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation (CARB 2014), On-Road Heavy Duty (New) Vehicle Program (CARB 2005b), In-Use Off-Road Diesel Vehicle Regulation (CARB 2011), and New Off-Road Compression-Ignition (Diesel) Engines and Equipment program (CARB 2008). These regulations and programs have timetables to which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

This section of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Local Regulations

Bay Area Air Quality Management District

The BAAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SFBAAB, where the Project site is located. The clean air strategy of the BAAQMD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the federal and California Clean Air Acts.

On April 19, 2017, the BAAQMD adopted the Spare the Air: Cool The Climate Final 2017 Clean Air Plan (2017 Clean Air Plan) (BAAQMD 2017c). The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the 2017 Clean Air Plan includes all feasible measures to reduce emissions of O_3 precursors (ROG and NO_x) and reduce O_3 transport to neighboring air basins. In addition, the 2017 Clean Air Plan builds on BAAQMD efforts to reduce $PM_{2.5}$ and TACs. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas (GHG) reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

BAAQMD establishes and administers a program of rules and regulations to attain and maintain state and national air quality standards and regulations related to TACs. The rules and regulations that may apply to the Proposed Project include the following:

- **Regulation 2, Rule 1 – Permits.** This rule specifies the requirements for authorities to construct and permits.
- **Regulation 6, Rule 1 – General Requirements.** This rule limits the quantity of particulate matter in the atmosphere through the establishment of limitations on emission rates, concentration, visible emissions, and opacity.
- **Regulation 6, Rule 3 – Wood-Burning Devices.** This rule limits the emissions of particulate matter and visible emissions from wood-burning devices used for primary heat, supplemental heat or ambiance.
- **Regulation 6, Rule 6 – Prohibition of Trackout.** This rule addresses fugitive road dust emissions associated with trackout of solid materials onto paved public roads outside the boundaries of large bulk material sites, large construction sites and large disturbed surface sites (sites of 1-acre or more), and large disturbed surface sites.

- **Regulation 8, Rule 1 – General Provisions.** This rule limits the emission of organic compounds into the atmosphere.
- **Regulation 8, Rule 3 – Architectural Coatings.** This rule limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the BAAQMD.
- **Regulation 8, Rule 15 – Emulsified and Liquid Asphalts.** This rule limits the emissions of VOCs caused by the use of emulsified and liquid asphalt in paving materials and paving and maintenance operations.

City of St. Helena 1993 General Plan

The Land Use and Growth Management and Public Health and Safety Elements of the City of St. Helena 1993 General Plan (City of St. Helena 1993) provides policies regarding air quality, including the following:

Policy 2.6.21: Require new residential projects to be designed to facilitate non-automobile modes of travel (i.e., walking, biking, transit, etc.).

Policy 8.2.3: Urge and support effective regulation of those sources of air pollution both inside and outside of St. Helena, which affect air quality, by implementing as many of the recommendations of the Napa County Congestion Management Plan (CMP) as feasible:

- The Napa County CMP recommends a number of land use-based measures to manage traffic congestion, and thereby reduce auto emissions. The recommendations are organized into two categories:
  - Destination-based Strategies: 1) Concentrate major work locations in nodes or employment centers; 2) Encourage mixed-based development that allows people to combine or avoid vehicle trips; and 3) Require site design features that encourage transit use.
  - Origin-based Strategies: 1) Match housing opportunities to income levels; 2) Provide housing opportunities near employment centers; and 3) Require design features that encourage transit use.

Policy 8.2.4: Consider cumulative air quality impacts from proposed developments and promote balanced land use development.

Policy 8.2.5: Support a population and employment growth policy which will not exceed Association of Bay Area Governments population and employment projections. This includes balancing the ratio of employment to population to protect, preserve and enhance the air quality within the area.

Policy 8.2.6: Minimize local adverse air quality impacts related to construction by requiring dust abatement procedures for local projects.

Policy 8.2.8: Encourage the use of EPA-approved wood stoves or fireplace inserts, rather than fireplaces, as a means of reducing emissions into the air.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The Land Use and Growth Management and Public Health and Safety Elements of the City of St. Helena 2019 General Plan (City of St. Helena 2019) provides policies regarding air quality, including the following:

Policy LU2.7: Ensure safe, walkable, and bikeable residential neighborhoods and vibrant, livable streets.

Policy PS1.1: Achieve and maintain clean, healthy air for the residents of St. Helena to preserve environmental quality and community health.

Policy PS1.2: Support regional efforts to achieve and maintain state ambient concentration standards to protect public health, reduce adverse industrial plant effects, and enhance the visual environment. In particular, provide local support for implementation of policies and measures set forth in the Napa County Congestion Management Program.

Policy PS1.3: Encourage effective regulation of those sources of air pollution, both inside and outside of St. Helena, which affect air quality, by implementing as many of the recommendations of the Napa County Congestion Management Plan as is feasible.

Policy PS1.4: Promote an optimized land use development pattern that minimizes cumulative air quality impacts from proposed developments.

3.3.4 Impacts

Methods of Analysis

Construction

Emissions from the construction phase of the Proposed Project were estimated using CalEEMod Version 2016.3.2 (CAPCOA 2017). CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant emissions associated with the construction and operational activities from a variety of land use projects, such as residential, commercial, and industrial facilities.

For the purposes of modeling, a 6-year build out was assumed. Under a 6-year buildout it is assumed site grading and all backbone infrastructure would be completed in the first Phase.

Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the applicant and CalEEMod generated default values. Complete detailed construction assumptions are included in Appendix C. Implementation of the Proposed Project would include construction of 87 residential units including 51 single-family residences, 11 accessory dwelling units (ADUs), and 25 multi-family units.

Buildout under the 6-year buildout scenario assumes no more than 9 single-family residences would be constructed each year and the 25 affordable housing units would be constructed by the third year. All of the other assumptions related to grading, site preparation and construction equipment would not change under this buildout scenario, only the timing when residences could be constructed.

As described in Chapter 2, Project Description, the Proposed Project would grade the 16.9-acre site. Soil balance would occur within each subset area and hauling would not be required between subset areas.[3] Balancing activities are anticipated to be performed through the use of off-road construction equipment (e.g., excavators, graders, dozers, and scrapers). The Proposed Project schedule was based on information provided by the Proposed Project applicant and illustrates a realistic buildout assuming the Tentative Subdivision Map is approved sometime in 2021. Table 3.3-4 provides the phasing assumptions under the 6-year Buildout.

Table 3.3-4
Construction Phasing Assumptions – 6-Year Buildout[1]

Proposed Project Construction Phase	Construction Start Month/Year	Construction End Month/Year
Phase 1		
Site Preparation	03/20/2023	03/31/2023
Grading	04/01/2023	04/28/2023
Paving	04/29/2023	05/26/2023
Building Construction	05/27/2023	12/22/2023
Architectural Coating	12/23/2023	01/19/2024
Phase 2		
Building Construction	03/18/2024	10/11/2024
Architectural Coating	10/12/2024	11/08/2024

[3] The estimated net grading quantity, as provided by the Proposed Project applicant, is approximately 24,321 cubic yards of fill to replace the 10,202 cubic yards of cut. This quantity does not include the spoils from the joint trench, roadways, curb and gutter, or foundations. It is the applicant's intent to balance the soils on site and not require the export or import of soils. Importing of some material, such as base rock, sand, and peat gravel that is used in the joint trenches, building foundations, and roadways would be required.

Table 3.3-4
Construction Phasing Assumptions – 6-Year Buildout[1]

Proposed Project Construction Phase	Construction Start Month/Year	Construction End Month/Year
Phase 3		
Building Construction	03/17/2025	01/30/2026
Architectural Coating	01/31/2026	02/25/2026
Phase 4		
Building Construction	03/23/2026	10/16/2026
Architectural Coating	10/17/2026	11/11/2026
Phase 5		
Building Construction	03/22/2027	10/15/2027
Architectural Coating	10/16/2027	11/10/2027
Phase 6		
Building Construction	03/20/2028	10/13/2028
Architectural Coating	10/14/2028	11/08/2028

Source: Appendix C.
Notes: See Appendix C for details.
1. Phase 1 = grading, site clearing, backbone infrastructure, 9 residential units and 2 accessory dwelling units (ADUs); Phase 2 = 9 residential units, 2 ADUs; Phase 3 = 9 residential units, 2 ADUs, 25 affordable units; Phase 4 = 9 residential units, 2 ADUs, Phase 5 = 9 residential units and 2 ADUs; Phase 6 = 9 residential units and 1 ADU.

The construction equipment mix used for estimating the construction emissions of the Proposed Project is shown in Table 3.3-5. Notably, because detailed specific information regarding the construction equipment fleet is unknown at the time of analysis, the analysis is based on the default construction equipment fleet provided by CalEEMod. The construction tabs within CalEEMod contain default information that was obtained from a survey of construction sites conducted by the South Coast Air Quality Management District (CAPCOA 2017). The construction survey data is grouped by construction phase and lot acreage. The default construction equipment list and phase length data were determined to be the most appropriate for the size and types surveyed.

Table 3.3-5
Construction Scenario Assumptions

Construction Phase	One-way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Site Preparation	18	0	0	Rubber Tired Dozers	3	8
				Tractors/Loaders/Backhoes	4	8
Grading	20	2	0	Excavators	2	8
				Graders	1	8
				Rubber Tired Dozers	1	8
				Scrapers	2	8
				Tractors/Loaders/Backhoes	2	8
Paving	15	0	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Building Construction	55	11	0	Cranes	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/Backhoes	3	7
				Trenchers	1	8
				Welders	1	8
Architectural Coating	11	0	0	Air Compressors	1	6

Source: Appendix C.

For the analysis, it was generally assumed that heavy construction equipment would be operating for approximately 8 hours per day, 5 days per week (22 days per month) during Proposed Project construction. CalEEMod defaults were applied for the worker, haul, and vendor trips (CAPCOA 2017). Notably, CalEEMod counts trips associated with road base materials, cement, and water trucks as vendor trips and are incorporated into the calculations of the Building Construction phase, as shown in Table 3.3-5.

Construction of Proposed Project components would be subject to BAAQMD's Regulation 6. This rule requires that Proposed Project construction include steps to restrict visible emissions of fugitive dust (BAAQMD 2018). Compliance with Regulation 6 would limit fugitive dust (PM_{10} and $PM_{2.5}$) that may be generated during grading and construction activities.

A detailed depiction of the construction schedule—including information regarding subphases and equipment used during each subphase—is included in Appendix C.

Operations

Emissions from the operational phase of the Proposed Project (if the Proposed Project is approved and when the Proposed Project is completed) were estimated using CalEEMod. Operational year 2029 was assumed as it would be the first full year following completion of construction.

Area Sources. CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment associated with the Proposed Project. Emissions associated with natural gas usage in space heating, hearths, water heating, and stoves were calculated in the building energy use module of CalEEMod, as described in the following text. Notably, it was assumed that hearth emissions would be from natural gas combustion.

Consumer products in this analysis are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, and architectural coatings are not considered consumer products in this case (CAPCOA 2017). Consumer product ROG emissions were estimated in CalEEMod based on the floor area of residential buildings, and on the default factor of pounds of ROG per building square foot per day.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of residential and nonresidential surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. Low VOC paint would be used in construction and regular maintenance activities. Low VOC paint is generally considered to contain less than 50 grams of VOC per liter, which was assumed for both interior and exterior painting. The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the residential surface area for painting equals 2.7 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2017).

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, trimmers, chain saws, and hedge trimmers. The emissions associated with landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days as a conservative measure. It is assumed that landscaping equipment would likely only operate during the week (not weekends); therefore, landscape operational days were assumed to be 180 days per year in CalEEMod (CAPCOA 2017).

Energy Sources. As represented in CalEEMod, energy sources would include emissions associated with building electricity and natural gas usage (non-hearth). Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site. The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission in December 2018. The 2019 standards became effective on January 1, 2020. CalEEMod default values were updated to reflect that the Proposed Project would comply with the requirements of the 2019 standards for this analysis.

Mobile Sources. Mobile sources for the Proposed Project would primarily be motor vehicles traveling to and from the Proposed Project. The anticipated trip generation, including the trip rates and total trips, are based on the Proposed Project's Traffic Impact Study prepared by Dudek (see Appendix K). CalEEMod was used to calculate the emissions resulting from on-road mobile sources associated with residents traveling to and from the proposed land use types.

Default trip generation rates included in CalEEMod for each proposed land use were adjusted to match the Proposed Project's trip generation. In addition, Saturday and Sunday trip rates were adjusted based on the CalEEMod default trip rates and the Proposed-Project-specific trip rates presented in the traffic study. The CalEEMod default and assumed trip rates are depicted in Table 3.3-6.

Table 3.3-6
CalEEMod Default and Adjusted Trip Rates

Land Use Type	Size Metric	CalEEMod Default Vehicle Trip Rates			Proposed Project Vehicle Trip Rates[1]		
		Weekday Trip Rate	*Saturday Trip Rate*	*Sunday Trip Rate*	*Weekday Trip Rate*	*Saturday Trip Rate*	*Sunday Trip Rate*
Single-Family Residential	Dwelling Unit	9.52	9.91	8.62	9.44	9.56	8.31
Accessory Dwelling Units	Dwelling Unit	6.59	7.16	6.07	7.36	8.18	6.94
Multi-Family Units	Dwelling Unit	5.81	5.67	4.84	9.44	9.56	8.31

Sources: CAPCOA 2017; Dudek 2020.
Note:
1 Weekday and Saturday trip rates were provided in the Proposed Project's Traffic Impact Study. Sunday trips rates was adjusted based on the ratio of the CalEEMod default Sunday trip rates to the CalEEMod default Saturday trip rates.

Thresholds of Significance

Consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable new increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Notably, in the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015, the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might impact a project's occupants, except where the project would significantly exacerbate an existing environmental condition. Accordingly, the significance criteria above related to exposure of sensitive receptors to substantial pollutant concentrations is relevant only to the extent that the project exacerbates existing air quality conditions.

The BAAQMD adopted updated CEQA Air Quality Guidelines, including new thresholds of significance, in June 2010 (BAAQMD 2010), and revised them in May 2011.[4] The CEQA Air Quality Guidelines advise lead agencies on how to evaluate potential air quality impacts, including establishing quantitative and qualitative thresholds of significance. The BAAQMD CEQA Air Quality Guidelines were recently re-released in May 2017 and include the same thresholds as in the 2010 and 2011 Guidelines for criteria air pollutants, TACs, and GHGs (BAAQMD 2017a). These thresholds are based on substantial evidence identified in BAAQMD's 2009 Justification Report (BAAQMD 2009) and are summarized in Table 3.3-7.

In general, the BAAQMD significance thresholds for criteria pollutants (ROG, NO_x, PM_{10}, $PM_{2.5}$, and CO) address the first two air quality Appendix G CEQA significance criteria (listed above). The BAAQMD maintains that these criteria pollutant thresholds are intended to maintain ambient air quality concentrations below state and federal standards and to prevent a

[4] The BAAQMD resolutions adopting and revising the significance thresholds in 2011 were set aside by a judicial writ of mandate on March 5, 2012. In May 2012, the BAAQMD updated its CEQA Air Quality Guidelines to continue to provide direction on recommended analysis methodologies, but without recommended quantitative significance thresholds (BAAQMD 2012). On August 13, 2013, the First District Court of Appeal ordered the trial court to reverse the judgment and upheld the BAAQMD's CEQA thresholds.

cumulatively considerable contribution to regional nonattainment with ambient air quality standards. The TAC thresholds (cancer and noncancer risks) and local CO thresholds address the third Appendix G significance criterion, and the BAAQMD odors threshold addresses the fourth Appendix G significance criterion.

Table 3.3-7
Thresholds of Significance

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs/day)	*Average Daily Emissions (lbs/day)*	*Maximum Annual Emissions (tons/year)*
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
$PM_{10}/PM_{2.5}$ (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average, 20.0 ppm (1-hour average)	
Risks and Hazards (Individual Project)	Compliance with Qualified Community Risk Reduction Plan or Increased cancer risk of >10.0 in a million Increased noncancer risk of >1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase >0.3 µg/m^3 annual average Zone of Influence: 1,000-foot radius from property line of source or receptor		
Risks and Hazards (Cumulative)	Compliance with Qualified Community Risk Reduction Plan or Cancer risk of >100 in a million (from all local sources) Noncancer risk of >10.0 Hazard Index (chronic, from all local sources) Ambient $PM_{2.5}$ >0.8 µg/m^3 annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of source or receptor		
Accidental Release of Acutely Hazardous Air Pollutants	None	Storage or use of acutely hazardous material located near receptors or new receptors located near stored or used acutely hazardous materials considered significant	
Odors	None	Five confirmed complaints to BAAQMD per year averaged over 3 years	

Source: BAAQMD 2017a.
Notes: lbs/day = pounds per day; tons/year = tons per year; ppm = parts per million; µg/m^3 = micrograms per cubic meter; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; CO = carbon monoxide

The BAAQMD established their thresholds of significance for CEQA purposes based on the regional goal to attain the NAAQS and CAAQS. Since an AAQS is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the AAQS, this means that the thresholds established by air districts are also protective of human health.

Threshold Criteria not Applicable to the Proposed Project

Due to the location and characteristics of the Proposed Project, certain significance criteria are not applicable to the Proposed Project and therefore, are not considered potential impacts. These criteria are addressed briefly below but are not discussed further in this document.

Other Emissions/Odors

The BAAQMD has identified typical sources of odor in the CEQA Air Quality Guidelines, a few examples of which include manufacturing plants, rendering plants, coffee roasters, wastewater treatment plants, sanitary landfills, and solid waste transfer stations. While sources that generate objectionable odors must comply with air quality regulations, the public's sensitivity to locally produced odors often exceed regulatory thresholds. Heavy-duty equipment on the Project site during construction would emit odors. However, the construction activity would be short-term and would cease to occur after individual construction is completed. Additionally, no other sources of objectionable odors have been identified for the Proposed Project. In regards to the exposure of objectionable odors to sensitive receptors, the Proposed Project is not a typical land use associated with the generation of a source of odor and would not generate odor impacts. Thus, Proposed-Project-related odor issues (the last significance threshold listed above) are not further evaluated.

Impacts and Mitigation Measures

3.3-1: Would the Proposed Project obstruct implementation of the applicable air quality plan? This impact would be less-than-significant.

An area is designated as "in attainment" when it is in compliance with the federal and/or state standards. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or public welfare with a margin of safety. The Project site is located within the SFBAAB, which is designated non-attainment for the federal 8-hour O_3 and 24-hour $PM_{2.5}$ standards. The area is in attainment or unclassified for all other federal standards. The area is designated non-attainment for state standards for 1-hour and 8-hour O_3, 24-hour PM_{10}, annual PM_{10}, and annual $PM_{2.5}$.

On April 19, 2017, the BAAQMD adopted the Spare the Air: Cool The Climate - Final 2017 Clean Air Plan (BAAQMD 2017c). The BAAQMD CEQA Air Quality Guidelines identify a three-step methodology for determining a project's consistency with the current Clean Air Plan. If the responses to these three questions can be concluded in the affirmative and those conclusions are supported by substantial evidence, then the BAAQMD considers that project to be consistent with air quality plans prepared for the Bay Area.

The first question to be assessed in this methodology is “does the project support the goals of the Air Quality Plan”? The BAAQMD-recommended measure for determining project support for these goals is consistency with BAAQMD thresholds of significance. If a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation measures, the project would be consistent with the goals of the 2017 Clean Air Plan. As indicated in the following discussion with regard to Impact 3.3-2 below, the Proposed Project would result in less than significant construction and operational emissions and would not result in long-term adverse air quality impacts. Therefore, the Proposed Project would be considered to support the primary goals and be consistent with the BAAQMD current Clean Air Plan.

The second question to be assessed is “does the project include applicable control measures from the Clean Air Plan?” The 2017 Clean Air Plan contains 85 control measures aimed at reducing air pollution in the Bay Area. Projects that incorporate all feasible air quality plan control measures are considered consistent with the Clean Air Plan. The control strategies of the 2017 Clean Air Plan include measures in the categories of stationary sources, the transportation sector, the buildings sector, the energy sector, the agriculture sector, natural and working lands, the waste sector, the water sector, and super-GHG measures. Depending on the control measure, the tools for implementation include leveraging the BAAQMD rules and permitting authority, regional coordination and funding, working with local governments to facilitate best policies in building codes, outreach and education, and advocacy strategies.

Stationary Source Control Measures. The stationary source control measures are designed to reduce emissions from stationary sources including metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the BAAQMD and then enforced by the BAAQMD. Since the Proposed Project would not include any stationary sources of emissions. Therefore, the stationary source control measures of the Clean Air Plan are not applicable to the Proposed Project.

Transportation Control Measures. The transportation control measures aim to decrease emissions of criteria pollutants, TACs, and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The Proposed Project would develop new residences located near existing residential uses. Furthermore, the Proposed Project would also develop pedestrian and bicycle facilities, eventually connecting the Regional Vine Trail from Calistoga to the Vallejo Ferry once these improvements are completed. Therefore, the Proposed Project would not conflict with the BAAQMD’s initiatives to reduce vehicle trips and vehicle miles traveled and would support alternative transportation.

Energy Control Measures. The energy control measures are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the

Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. Notably, these measures apply to electrical utility providers and local government agencies, which would serve the Proposed Project. Therefore, the energy control measures of the Clean Air Plan are not applicable to the Proposed Project.

Building Control Measures. The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters but has limited authority to regulate buildings themselves. Therefore, the strategies in the building control measures focus on working with local governments that do have authority over local building codes, to facilitate adoption of best GHG control practices and policies. The Proposed Project is required to meet Title 24 and CALGreen standards to reduce energy demand and increase energy efficiency. Therefore, the Proposed Project would not conflict with the building control measures of the Clean Air Plan.

Agriculture Control Measures. Since the Proposed Project does not include any agricultural activities (the remaining one-acre vineyard is too small to be considered agriculture), the agriculture control measures of the Clean Air Plan are not applicable to the Proposed Project.

Natural and Working Lands Control Measures. Since the Proposed Project does not include the disturbance of any rangelands or large areas of wetlands, the natural and working lands control measures of the Clean Air Plan are not applicable to the Proposed Project.

Waste Management Control Measures. The waste management control measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The Proposed Project would comply with local requirements for waste management (e.g., recycling and/or composting services). Therefore, the Proposed Project would be consistent with the waste management control measures of the Clean Air Plan.

Water Control Measures. The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works, and promoting the use of biogas recovery systems. These measures would apply to publicly owned treatment works and local government agencies and not the Proposed Project.

Super GHG Control Measures. The super-GHG control measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies, which are not applicable to the Proposed Project.

The Proposed Project would not conflict with any applicable control measures from the 2017 Clean Air Plan, as discussed above.

The third question to be assessed in this consistency methodology is "does the project disrupt or hinder implementation of any control measures from the Clean Air Plan?" Examples of how a project may cause the disruption or delay of control measures include a project that precludes an extension of a transit line or bike path or proposes excessive parking beyond parking requirements. The Proposed Project would not create any barriers or impediments to planned or future improvements to transit or bicycle facilities in the area, nor would it include excessive parking. Therefore, the Proposed Project would not hinder implementation of 2017 Clean Air Plan control measures.

In summary, the responses to all three of the questions with regard to Clean Air Plan consistency are affirmative and the Proposed Project would not conflict with or obstruct implementation of the Clean Air Plan. This is a **less-than-significant impact.**

Mitigation Measures

None required.

3.3-2: Would implementation of the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard? This impact would be less than significant.

Past, present, and future development projects may contribute to the SFBAAB adverse air quality impacts on a cumulative basis. Per BAAQMD's CEQA Air Quality Guidelines, by its nature air pollution is largely a cumulative impact; no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be considered cumulatively considerable, resulting in a significant adverse air quality impact to the region's existing air quality conditions. Therefore, if the Proposed Project's emissions are below the BAAQMD thresholds or screening criteria, then the Proposed Project would not result in a cumulatively considerable net increase of any criteria air pollutant.

The CalEEMod Version 2016.3.2 model was used to estimate emissions related to construction activities. CalEEMod input parameters, including the Proposed Project's land use type and size, construction schedule, and anticipated construction equipment, were based on information provided by the Proposed Project applicant, or default model assumptions if Proposed Project specifics were unavailable.

Construction

Sources of emissions during Proposed Project construction would include off-road construction equipment exhaust, on-road vehicles exhaust and entrained road dust (i.e., material delivery trucks and worker vehicles), paving, and architectural coating activities. Detailed assumptions associated with Proposed Project construction are included in Appendix C.

Average daily emissions were computed by dividing the total construction emissions by the number of active construction days, which were then compared to the BAAQMD construction thresholds of significance. Table 3.3-8 shows average daily construction emissions of O_3 precursors (ROG and NO_x), PM_{10} exhaust, and $PM_{2.5}$ exhaust during Proposed Project construction under a 6-year buildout scenario.[5]

Table 3.3-8
Average Daily Unmitigated Construction Emissions – 6-Year Buildout

Years	ROG	NO_x	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
	Pounds per Day			
2023-2028 Construction	3.1	12.7	0.5	0.5
BAAQMD Construction Thresholds	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No

Source: See Appendix C for detailed results.
Notes: The values shown are average daily emissions based on total overall tons of construction emissions, converted to pounds, and divided by1,142 active work days.
ROG = reactive organic gases; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

As shown in Table 3.3-8 construction of future residences would not exceed BAAQMD significance thresholds under either buildout scenario. Criteria air pollutant emissions during construction would be less than significant. Although the BAAQMD does not have a quantitative significance threshold for fugitive dust, the BAAQMD's CEQA Air Quality Guidelines recommend that projects determine the significance for fugitive dust through application of best management practices (BMPs). The Proposed Project contractor would be required as conditions of approval to implement the following BMPs that are required of all construction projects:

1. All exposed surfaces (e.g., parking/staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

[5] Fuel combustion during construction and operations would also result in the generation of SO_2 and CO. These values are included in Appendix C. However, since the SFBAAB is in attainment of these pollutants, the BAAQMD has not established a quantitative mass-significance threshold for comparison and are not included in the project-generated emissions tables in this document. Notably, the BAAQMD does have screening criteria for operational localized CO, which are discussed in more detail below.

3. All visible mud or dirt track-out onto local roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Implementation of the required fugitive dust control measures would ensure air quality and fugitive dust-related impacts associated with Proposed Project construction would remain **less than significant**.

Operations

Operation of the Proposed Project would generate criteria pollutant (including ROG, NO_x, PM_{10}, and $PM_{2.5}$) emissions from mobile sources (vehicular traffic), area sources (consumer products, architectural coatings, and landscaping equipment), and energy sources (electrical consumption). CalEEMod was used to estimate daily emissions from Proposed-Project-related operational sources. Table 3.3-9 summarizes the operational emissions criteria pollutants that would be generated from the Proposed Project. Operational emissions were then compared to the BAAQMD operational thresholds.

Table 3.3-9
Daily Unmitigated Operational Emissions

Source	ROG	NO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day			
Area	3.6	1.8	0.2	0.2
Energy	0.1	0.5	<0.1	<0.1

Table 3.3-9
Daily Unmitigated Operational Emissions

Source	ROG	NO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day			
Mobile	0.9	4.6	3.6	1.0
Total	4.6	6.9	3.8	1.2
BAAQMD Operational Thresholds	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No

Source: See Appendix C for detailed results.
Notes: The values shown are the maximum summer or winter daily emissions results from CalEEMod.
ROG = reactive organic gases; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; <0.01 = value less than reported 0.1.

As indicated in Table 3.3-9, operational emissions of ROG, NO_x, PM_{10}, and $PM_{2.5}$ would not exceed the BAAQMD significance thresholds resulting from development of the Proposed Project. Therefore, the Proposed Project would have a **less-than-significant impact** in relation to regional operational emissions.

Health Effects of Criteria Air Pollutants

Construction and operation of the Proposed Project would not result in emissions that exceed the BAAQMD emission thresholds for any criteria air pollutants, including ROG, NO_x, PM_{10}, or $PM_{2.5}$. ROG emissions would be associated with motor vehicles, construction equipment, and architectural coatings; however, Proposed-Project-generated ROG emissions would not result in the exceedances of the BAAQMD thresholds, as shown in Table 3.3-8 and Table 3.3-9. Generally, the VOCs in architectural coatings are of relatively low toxicity. Additionally, the Proposed Project would be required to adhere to Regulation 8, Rule 3 – Architectural Coatings, which restricts the VOC content of coatings.

ROG and NO_x are precursors to O_3, for which the SFBAAB is designated as nonattainment with respect to the NAAQS and CAAQS. The health effects associated with O_3 are generally associated with reduced lung function. The contribution of ROG and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SFBAAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the ROG emissions would occur because exceedances of the O_3 AAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, because ROG and NO_x emissions associated with Proposed Project construction and/or operation would not exceed the BAAQMD daily thresholds, it is not anticipated the

Proposed Project would contribute substantially to regional O_3 concentrations and the associated health effects.

Construction and operation of the Proposed Project would not contribute to exceedances of the NAAQS and CAAQS for NO_2. Health effects that result from NO_2 and NO_x include respiratory irritation, which could be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, Proposed Project construction would be relatively short-term, and off-road construction equipment would be operating at various portions of the site and would not be concentrated in one portion of the site at any one time. In addition, existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Construction and operation of the Proposed Project would not create substantial, localized NO_x impacts. Therefore, the Proposed Project is not anticipated to result in potential health effects associated with NO_2 and NO_x.

CO tends to be a localized impact associated with congested intersections. As described in Impact 3.3-3 below, the Proposed Project would result in minimal new traffic trips that would not exceed the BAAQMD CO screening criteria resulting in the formation of potential CO hotspots. Thus, the Proposed Project's CO emissions would not contribute to significant health effects associated with this pollutant.

Construction and operation of the Proposed Project would also not exceed thresholds for PM_{10} or $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter or obstruct the SFBAAB from coming into attainment for these pollutants. The Proposed Project would also not result in substantial DPM emissions during construction and operation, and therefore, would not result in significant health effects related to DPM exposure. Additionally, the Proposed Project would implement dust control strategies and be required to comply with Regulation 6, Rule 6 – Prohibition of trackout and the BAAQMD fugitive dust BMPs, which limit the amount of fugitive dust generated during construction. Due to the minimal contribution of PM_{10} and $PM_{2.5}$ during construction and operation, it is not anticipated that the Proposed Project would result in potential health effects associated related to particulate matter.

In summary, because construction and operation of the Proposed Project would not result in the exceedances of the BAAQMD significance thresholds for ROG, NO_x, PM_{10}, and $PM_{2.5}$, and because the BAAQMD thresholds are based on levels that the SFBAAB can accommodate without affecting the attainment date for the AAQS and the AAQS are established to protect public health and welfare, it is anticipated that the Proposed Project would not result in health effects associated with criteria air pollutants.

Notably, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or

potential additional nonattainment days, and methods available to quantitatively evaluate health effects may not be appropriate to apply to emissions associated with the Proposed Project, which cannot be estimated with a high-level of accuracy. Notwithstanding, because construction and operation of the Proposed Project would not result in exceedances of the BAAQMD significance thresholds for criteria pollutants, potential health impacts associated with criteria air pollutants would be **less than significant**.

Mitigation Measures

None required.

3.3-3: Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations? This impact would be less than significant.

Criteria Air Pollutant Emissions and Associated Pollutant Concentrations

As discussed above in Impact 3.3-2, because construction and operation of the Proposed Project would not result in the exceedances of the BAAQMD significance thresholds for ROG, NO_x, PM_{10}, and $PM_{2.5}$, and because the BAAQMD thresholds are based on levels that the SFBAAB can accommodate without affecting the attainment date for the AAQS and the AAQS are established to protect public health and welfare, it is anticipated that the Proposed Project would not result in health effects associated with criteria air pollutants. Therefore, potential health impacts associated with criteria air pollutants would be **less than significant**.

Toxic Air Contaminants

The BAAQMD has adopted project and cumulative thresholds for three risk-related air quality indicators to sensitive receptors: cancer risks, noncancer health effects, and increases in ambient air concentrations of $PM_{2.5}$. These impacts are addressed on a localized, rather than regional, basis in relation to sensitive receptors identified for a project. Sensitive receptors are groups of individuals, including children, older adults, the acutely ill, and the chronically ill, that may be more susceptible to health risks due to chemical exposure. Sensitive-receptor population groups are likely to be located at hospitals, medical clinics, schools, playgrounds, childcare centers, residences, and retirement homes. As previously discussed, the nearest sensitive receptors are single-family residences located approximately 20 feet east of the Project site.

The greatest potential for TAC emissions during construction would be DPM emissions from heavy equipment operations and heavy-duty trucks during construction of the Proposed Project, and the associated health impacts to sensitive receptors. As shown in Table 3.3-8, average daily particulate matter (PM_{10} or $PM_{2.5}$) exhaust emissions generated by construction equipment

operation would be minimal, well below the BAAQMD significance thresholds. Moreover, for the purposes of modeling it is assumed construction would occur over an approximate 6-year period (1,142 active construction days), which equates to approximately 10% of the total 30-year analysis exposure period for residential receptors, after which Proposed-Project-related TAC emissions would cease. Furthermore, the Proposed Project would not require the extensive use of heavy-duty construction equipment, which is subject to CARB's Airborne Toxic Control Measures for in-use diesel construction equipment to reduce DPM emissions, and it would not involve extensive use of diesel trucks.

Operation of the Proposed Project would not result in any non-permitted direct emissions (e.g., those from a point source such as diesel generators) or result in substantial diesel vehicle trips (i.e., delivery trucks). Therefore, the Proposed Project would not result in exposure of sensitive receptors in the vicinity of the Project site to substantial TAC concentrations due to either construction or operation and impacts would be **less than significant**.

Local Carbon Monoxide Concentrations

The BAAQMD thresholds of significance for local CO emissions is the 1-hour and 8-hour CAAQS of 20 ppm and 9ppm, respectively. By definition, this represent levels that are protective of public health. According to the BAAQMD, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met (BAAQMD 2017a):

1. Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

The Proposed Project would generate minimal new traffic trips, estimated to be approximately 900 weekday vehicle trips, and would comply with the BAAQMD screening criteria. Accordingly, Proposed-Project-related traffic would not exceed CO standards and therefore, no further analysis was conducted for CO impacts. Thus, the CO emissions impact would be **less-than-significant on a project-level and cumulative basis.**

Mitigation Measures

None required.

3.3.5 Cumulative Impacts

The cumulative context of an air pollutant is dependent on the specific pollutant being. O_3 precursors are a regional pollutant; therefore, the cumulative context would be existing and future development within the entire SFBAAB. This means that O_3 precursors generated in one location do not necessarily have O_3 impacts in that area. Instead, precursors from across the region can combine in the upper atmosphere and be transported by winds to various portions of the air basin. Consequently, all O_3 precursors generated throughout the air basin are part of the cumulative context.

The geographic scope for the cumulative analysis is Napa County and surrounding areas, which are located within the SFBAAB for O_3. The SFBAAB includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, as well as the southern half of Sonoma County and the southwestern portion of Solano County. The BAAQMD establishes emissions thresholds for regional emissions.

Particulates (fugitive dust and DPM) and TACs would result in localized impacts in close proximity to pollutant sources. There are no other active cumulative projects in the immediate vicinity of the Project site that are anticipated to contribute to localized TAC exposure; therefore, an analysis of the cumulative effects is not addressed below.

3.3-4: Would the Proposed Project contribute to cumulative air quality emissions within the existing area? The Project's contribution would not be considerable.

As previously discussed under Impact 3.3-2, the Proposed Project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants. Therefore, the Proposed Project's cumulative contribution would be negligible and impacts would not be considerable resulting in a **less-than-significant cumulative impact**.

Mitigation Measures

None required.

3.3.6 References

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3.4 BIOLOGICAL RESOURCES

3.4.1 Introduction

This section describes the existing biological resources present within the proposed Hunter Subdivision Project (Proposed Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies feasible mitigation measures.

Comments received in response to the Notice of Preparation included general concerns regarding potential Proposed Project impacts to wildlife species and the Napa River, and specific concerns regarding potential Proposed Project effects on fish species in the Napa River. All of the concerns raised are addressed in this section. A copy of the Notice of Preparation and comments received is included in Appendix A.

Biological resources discussed herein were identified through the review and compilation of existing information and field reconnaissance surveys conducted by Dudek staff. Existing documentation of potential biological resources at the Project site include an Updated Biological Assessment report prepared by Wetland Research Associates (WRA), a Wetland Delineation prepared by Dudek, and the results of a rare plant survey all provided in Appendix D. Other sources reviewed are listed in Section 3.4.6, References.

3.4.2 Environmental Setting

This section provides information on the condition of natural resources in the region and on the Project site, the extent of sensitive natural communities and critical habitat, presence or absence of jurisdictional wetlands on the site, and the distribution and habitat requirements of special-status species that have been recorded from or are likely to occur in the Proposed Project vicinity and identifies the biological resources that could be affected by implementation of the Proposed Project.

Summary of Previous Studies

Wetland Delineation **(North Fork Associates 2006):** North Fork Associates conducted a formal wetland delineation of the Project site in July 2006. Two ditches were mapped as present in the Project site. No wetlands were identified during the fieldwork. The results of the delineation were summarized in a formal report (dated September 12, 2006). The U.S. Army Corps of Engineers (USACE) verified the delineation in 2008, which is valid for 5 years from the date of the letter.

Biological Assessment **(WRA 2011):** WRA conducted a field reconnaissance survey of the Project site in November 2011, to verify site conditions, assess habitat suitability for special-

status species, and evaluate the potential presence of any wetlands or other waters of the U.S. The survey was conducted after any wetlands that may have formed as a result of the placement of fill assocated with the Napa River Flood Control project in 2010. No special-status species were detected in or near the Project site during the 2011 survey.

***Updated Biological Assessment* (WRA 2015):** WRA conducted a biological assessment of the Project site in March 2015. The purpose of the survey was to compare existing site conditions to those documented in 2011. The report concluded that existing site conditions have not changed substantially since 2011. No special-status species were detected during the 2015 site assessment.

Summary of Studies Conducted as Part of This Project

The following technical studies and site assessments were conducted in 2018 and/or 2019 by Dudek and are included in Appendix D:

- In February 2018, Dudek conducted a biological reconnaissance survey to to verify WRA's 2015 Biological Assessment. The survey included a general assessessment of on-site habitats and their potential to support various special-status plant and wildlife species and to characterize and map on-site vegetation communities. The survey consisted of pedestrian transects throughout the Project site to collect data related to biological resources present or potentially present within the site. An aerial photograph and digital georeferenced map with an overlay of the property boundary was used to map the vegetation communities and record any anecdotally observed special-status or sensitive biological resources while in the field. Incidental observations of wildlife (common and/or special-status) or wildlife sign (e.g., tracks, scat) were also recorded. The field survey included the Project site only; however, general characteristics of adjacent properties were also noted during the survey by scanning with and without binoculars. A separate report summarizing Dudek's February 2018 survey was not prepared because the results of the survey have been incorporated into this section.
- In February and April 2019, Dudek biologists conducted a jurisdictional delineation to characterize and map wetland/aquatic areas potentially under the jurisdiction of USACE pursuant to Section 404 of the federal Clean Water Act and under California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Section 1600 of the California Fish and Game Code. Potentially jurisdictional features were delineated based on methodology described in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). Non-wetland waters of the United States are delineated based on the presence of an ordinary high water mark, as determined using the methodology in A Field Guide to

the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2010).

- In June 2020, a Dudek botanist conducted a plant survey for the bent-flowered fiddleneck (*Amsinckia lunaris),* a California Rare Plant Rank (CRPR) 1B.2 species, which is defined by the California Native Plant Society (CNPS) as "fairly endangered in California." The survey was conducted according to the 2018 CDFW plant survey protocol during the blooming period (March through June) when the plant would be evident and identifiable. No bent-flowered fiddleneck plants were detected.

Regional Setting

The City of St. Helena (City) is situated within the Napa Valley floor, bounded by the Mayacamas Mountain Range on the western and northern sides and the Howell Mountains on the eastern side. The City is generally characterized by a mix of urban development and agricultural uses with some undeveloped wooded hillsides to the east and west of downtown and wooded hillsides interspersed with residential development to the west of downtown (City of St. Helena 2018). The Project site is located approximately three blocks east of downtown and State Route 29, and west of the Napa River in an area of medium- to low-density housing.

The Proposed Project site is located in the North Coast Ranges geographic subregion, on the border of the Inner North Coast Ranges district and the Outer North Coast Ranges District (Jepson Flora Project 2019). The Inner North Coast Ranges district is characterized by low rainfall and hot, dry summers while the Outer North Coast Ranges district has more marine influences and is characterized by higher rainfall (Baldwin et al. 2012). The Napa Valley, in which the city is located, separates these two districts. The western hills of the Napa Valley contain more redwoods and mixed evergreen forest while the eastern hills are dominated by chaparral and oak woodlands. Rainfall is intermediate between the two districts and averages 34.61 inches a year and temperatures range from an average low of 36°F in January to an average high of 89°F in July (WRCC 2019).

Local Setting

The Project site has been extensively altered by past activities associated with agriculture, and the construction of the City's Flood Protection Project, which included the placement of excess fill material from the Flood Protection Project on the site. The Project site is bordered on the south and east by medium-density residential development, to the northeast by the Napa River and associated riparian vegetation, and to the northwest by a gravel levee maintenance road/public trail and agricultural and rural residential land.

Topography

The Project site is generally flat, with micro topography created by past agriculture and grading practices, including the placement of fill on the site. The current elevation of the site varies from approximately 230 feet above mean sea level on its southern edge to approximately 212 feet above mean sea level on its northern edge. The portion of the site planned for the extension of Adams Street ranges from 243 feet above mean sea level to 230 feet above mean sea level. See Section 3.6, Geology and Soils, for an in-depth discussion of soils, geology, and topography of the Project site.

Soils

The United States Department of Agriculture's Natural Resources Conservation Service conducts soil surveys and creates maps representing the location and type of soil in order to aid in agricultural, conservation, and land use decisions. The Natural Resources Conservation Service identifies the following soils as occurring on the Project site (USDA 2019):

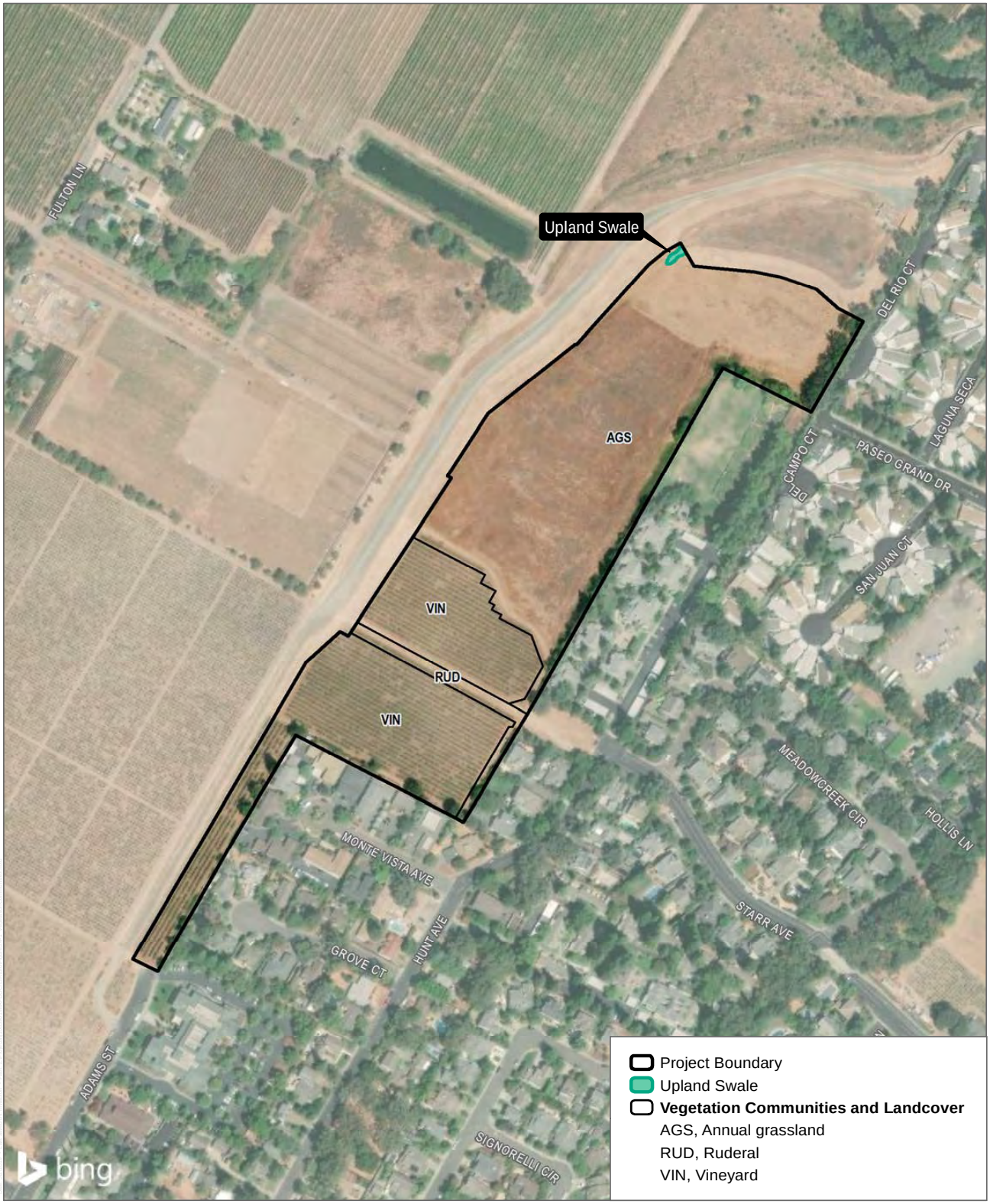
- Bale clay loam, 0 to 2% slopes
- Bale clay loam, 2 to 5% slopes
- Cole silt loam, 0 to 2% slopes
- Cortina very gravelly loam, 0 to 5% slopes, moist

Hydrology

The Project site is within the greater Napa River Watershed, which drains water from hillsides through the Napa Valley and into the San Pablo Bay, approximately 50 miles to the south (NCWICC 2019a). The Napa River flows from northwest to southeast approximately 500 feet north/northeast of the Project site. The Project site has been partially graded in the past for construction of a City storm water detention basin which is currently located directly north/northeast of the site. A drainage ditch along the southwestern edge of the Project site drains rainwater runoff from the site north and east and into this detention basin. See Section 3.9, Hydrology and Water Quality, for an in-depth discussion of drainage and hydrology on the Project site.

Vegetation Communities and Land Cover Types

One vegetation community, three anthropogenic land cover types, and two aquatic land cover types are present in the Project site. The vegetation community is California annual grassland. Anthropogenic land cover types include agriculture (vineyard), ruderal, and upland swale. Aquatic land cover types include seasonal wetlands and a drainage ditch. Table 3.4-1 provides a breakdown of the various vegetation communities or land cover types and Figures 3.4-1 and 3.4-2 graphically depicts this information. A more detailed discussion is included below.



SOURCE: Bing Maps 2019

DUDEK

0 150 300 Feet

FIGURE 3.4-1

Vegetation Communities and Land Cover Types

Hunter Subdivision Project

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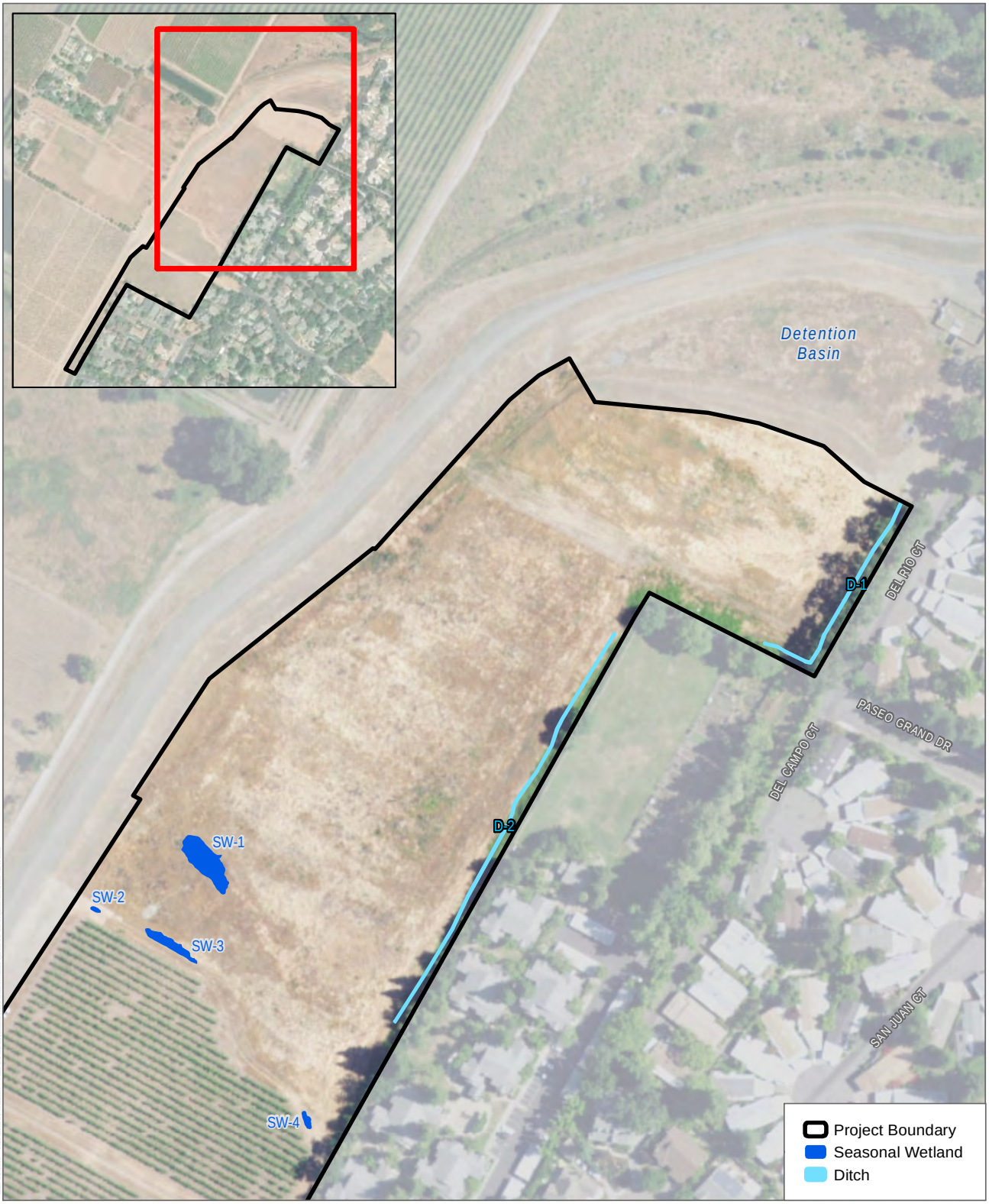

SOURCE: USDA 2016

DUDEK

0 80 160 Feet

FIGURE 3.4-2

On-Site Seasonal Wetlands and Drainage Features

Hunter Subdivision Project

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Table 3.4-1
Vegetation Communities and Land Cover Types

Vegetation Community or Land Cover Type	Acres
Vegetation Communities	
California Annual Grassland	9.67
Subtotal	9.67
Anthropogenic Land Cover Types	
Agriculture (Vineyard)	6.02
Ruderal	0.45
Upland Swale	0.02
Subtotal	6.49
Aquatic Land Cover	
Seasonal Wetland	0.07
Ditch	0.06
Subtotal	0.13
Total	16.29

Source: Dudek 2019.

California Annual Grassland. California annual grassland comprises 9.67 acres of the Project site. Non-native and ruderal grass and forb species such as wild oat (*Avena fatua*), Mediterranean barley (*Hordeum murinum*), seaside barley (*Hordeum marinum*), redstem stork's bill (*Erodium cicutarium*), wild radish (*Raphanus sativus*), and Italian thistle (*Carduus pycnocephalus*) are common in this vegetation community. This vegetation community does not correspond to any identified community in the *Manual of California Vegetation, Online Edition*, and it is not a sensitive natural community (CDFW 2018; CNPS 2018).

The California annual grassland on the Project site is mowed or disked on a semi-annual basis. Although dominated by non-native grasses, the California annual grassland onsite provides foraging opportunities for raptor species. Additional wildlife that may use this vegetation community for foraging or breeding include ground-nesting birds such as mourning dove (*Zenaida macroura*), black-tailed jackrabbit (*Lepus californicus*), and fossorial mammals such as California vole (*Microtus californicus*) and Botta's pocket gopher (*Thomomys bottae*).

Agriculture (Vineyard). An approximately 6.02-acre vineyard occupies the southwestern portion of the Project site along with an approximately 1-acre area of vineyard located in the southwestern "panhandle" portion of the site. These vineyards are maintained on an annual basis through pruning, mowing, and disking. Cultivated grapes (*Vitis* spp.) is the primary species in this land cover type, with a sparse herbaceous layer between vine rows consisting of non-native grasses and forbs similar to those found in the adjacent California annual grasslands.

Ruderal. Ruderal non-natural land cover type includes areas disturbed by anthropogenic or human activities that retain a pervious surface without vegetation or that support an assortment of weedy, non-native vegetation. Vegetation common in the 0.45 acres of ruderal land cover onsite include wild oat, prickly lettuce (*Lactuca serriola*), black mustard (*Brassica nigra*), and yellow star thistle (*Centaurea solsitialis*). On the Project site, ruderal areas include areas regularly maintained through disking and mowing. Vegetation in these areas is dominated by non-native annual species such as cheeseweed (*Malva parviflora*), winter marigold (*Calendula arvensis*), and grasses similar to those discussed in the annual grasslands.

Upland Swale. There is one upland swale in the northwest corner of the Project site. The swale directs surrounding surface runoff to the detention basin north of the Project site. Apart from the detention basin, the upland swale is isolated from aquatic features. Vegetation in the swale is consistent with the surrounding California annual grassland. No defined bed and bank are associated with the swale, which was likely excavated specifically for stormwater drainage purposes.

Seasonal Wetlands. Four seasonal wetlands occur in the California annual grassland onsite. These areas are approximately 0.07 acres, combined, and are discernable from the surrounding grassland by a change in the dominant vegetation and/or lack of vegetation in the deepest portions due to seasonal ponding of water. Vegetation common in seasonal wetlands onsite include seaside barley, curly dock (*Rumex crispus*) and fiddle dock (*Rumex pulcher*), all of which are common in areas of seasonal inundation.

Drainage Ditch. An approximately 0.06-acre ditch runs the length of the northwestern edge of the Project site (see Figure 3.4-2, On-Site Seasonal Wetlands and Drainage Features). Himalayan blackberry (*Rubus armeniacus*) brambles dominate the vegetation in the ditch. The farther northeast the ditch travels, the more incised it becomes. At the northeastern end of the Project site, the ditch is approximately five feet deep with a defined bed and bank, as well as a canopy of valley oak (*Quercus lobata*) trees. Himalayan blackberry, toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), and oak seedlings dominate the understory of the valley oak canopy.

Sensitive Natural Communities

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. The CDFW maintains a list of natural vegetation communities. Those communities with a State or Global Rarity ranking of S or G 1 through 3 are considered sensitive (CDFW 2018). In addition to sensitive natural communities, wetlands and riparian vegetation communities otherwise protected under state and federal law are also considered sensitive.

Based on review of available resources and observation of the previously disturbed nature of vegetation communities and land cover types within the Project site, no sensitive natural communities, as defined by the CDFW (2018), occur within the Project site (Figure 3.4-1). Seasonal wetlands onsite, as well as the drainage ditch may be considered sensitive (Figure 3.4-2); these features are discussed in more detail under potentially jurisdictional wetlands and waters below.

Wildlife Movement and Nursery Sites

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation (extinction) or ecological catastrophes (e.g., fires). Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as “steppingstones” for dispersal.

The Project site is bordered by development to the east, south, and agriculture to the north/northwest. The Napa River riparian corridor is located approximately 500 feet northeast of the Project site and is identified as a major, regional north-south wildlife movement route in Napa County (Napa County Watershed Information & Conservation Council 2018). Additional landscape blocks and habitat linkages are located to the north, east, and west of the Project site, but are at least 1.4 miles from the site (refer to Figure 3.4-3, Wildlife Corridors and Habitat Linkages).

While the mature trees and shrubs along the Napa River provide cover and essential habitat linkage for resident and migratory wildlife, the Project site itself does not function as a wildlife movement corridor due to the surrounding development, lack of connectivity with other undeveloped areas, and existing and historic agricultural uses of the site. The grassland on the Project site does not provide adequate cover or nursery sites for mammal species with the exception of small, fossorial mammals such as pocket gophers and field mice.

The Napa River, generally north of the site, supports native resident and migratory fish, including Chinook salmon and steelhead. The two linear features onsite are ephemeral and separated from the Napa River to the north by culverts that are not regularly open for drainage to the river (see details in Section 3.9, Hydrology and Water Quality). As such, these fish species are not expected to occur on or adjacent to the Project site.

Special-Status Resources

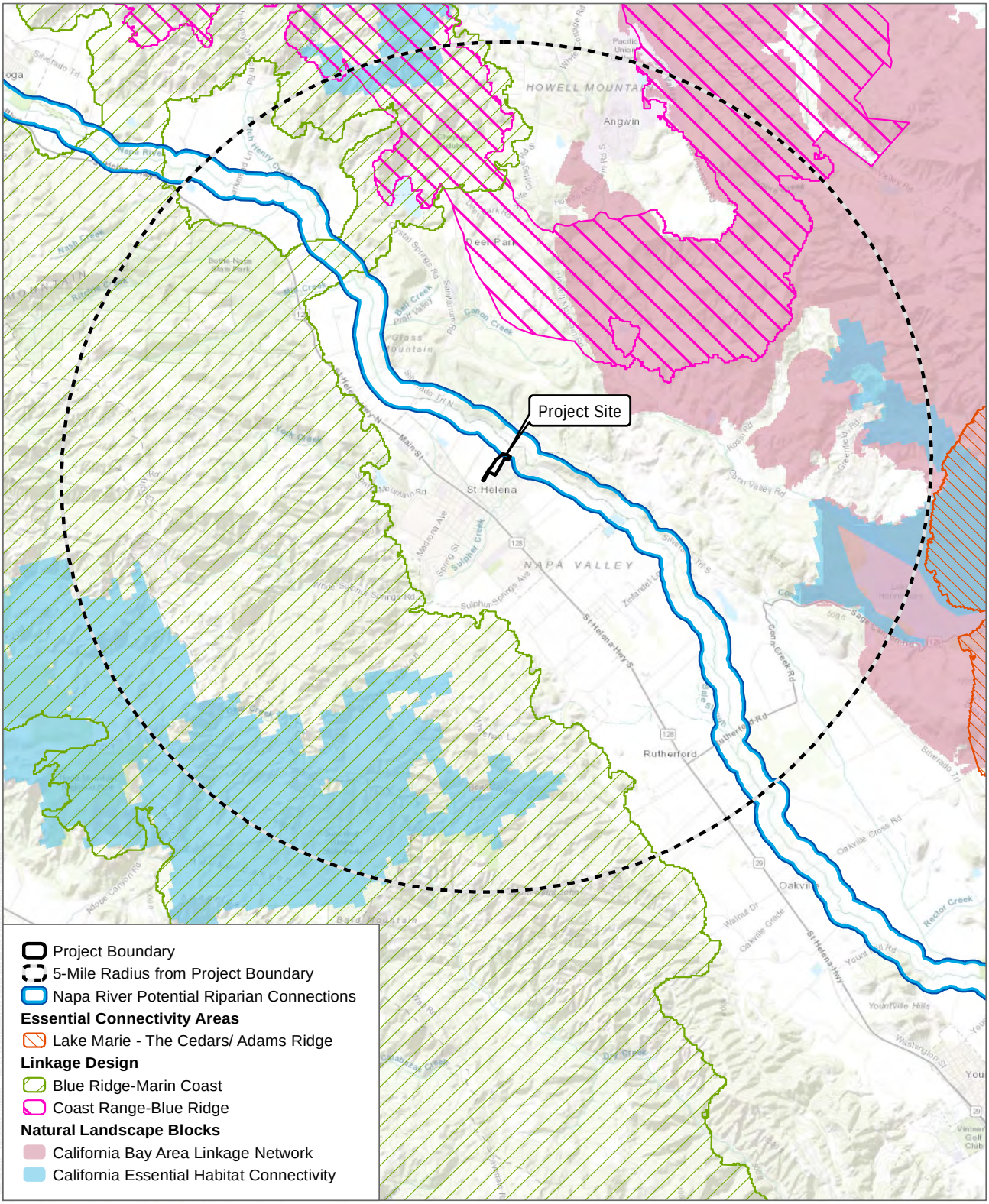
For the purposes of this report, special-status plant species are those plants listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA) (16 USC Section 1531 et seq.); those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA) (Fish & Game Code, Section 2050 et seq.); and plants that are CRPR 1 and 2 in the CNPS's online Inventory of Rare and Endangered Plants (CNPS 2019). Special-status wildlife species are those that are designated as either rare, threatened, or endangered (or candidate) by CDFW or the USFWS; are protected under either the CESA or FESA; meet the California Environmental Quality Act (CEQA) definition for endangered, rare, or threatened (CCR Tit. 14, Section 15380(b),(d)); are considered fully protected under the California Fish & Game Code, Section 3511, 4700, 5050, and 5515; or that are on the CDFW Special Animals List (CDFW 2018) and determined by CDFW to be a Species of Special Concern.

As noted in the Methods of Analysis section below, WRA initially evaluated the potential occurrence of special-status plant and wildlife species on the Project site in 2015. Dudek biologists conducted additional resource database searches in 2018, 2019, and the species list was updated (Tables 3.4-2 and 3.4-3 and Figure 3.4-4, CNDDB Occurrences). This list was primarily derived from a review of the California Natural Diversity Database (CNDDB) (CDFW 2019), the CNPS Inventory of Rare and Endangered Plants (CNPS 2019), and the USFWS lists of federal endangered and threatened species (USFWS 2019).

The potential for those species identified in the literature search to occur on the Project site were evaluated based on the habitat requirements of each species relative to the observed existing conditions, results of previous general and focused habitat assessments and surveys for plants and animals conducted in November 3, 2011, and March 20, 2015 (WRA 2015), and surveys conducted by Dudek biologists on February 20, 2018, April 10, 2019, and June 1, 2020.

Special-Status Plants

Based on the review of the databases and other information sources, 57 special-status plant species are documented as occurring or potentially occurring in the vicinity of the Project site (Table 3.4-2). Review of Project site conditions and results of surveys conducted by WRA and Dudek staff biologists demonstrate that no special-status plants are expected to occur on the Project site for varying reasons such as the absence of habitat requirements for the species, the distance to known occurrences, the species distribution or elevation ranges, or species absence during focused protocol surveys.



SOURCE: CDFW 2015/2016, Bing Maps 2019

DUDEK

0 4,050 8,100 Feet

FIGURE 3.4-3

Wildlife Corridors and Habitat Linkages

Hunter Subdivision Project

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Project Boundary

CNDDB Species Occurence

Plant

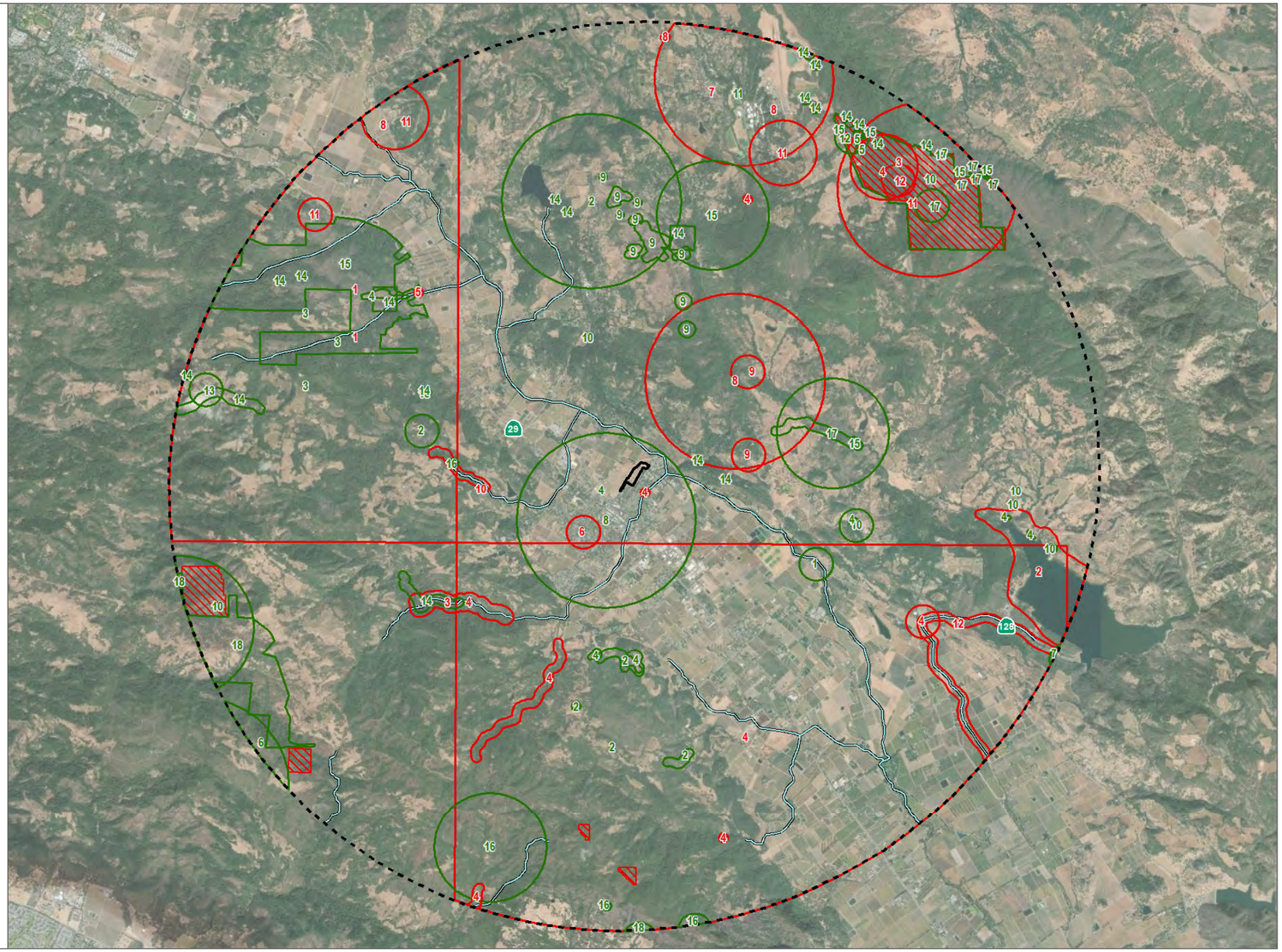
1, Bent-flowered fiddleneck (*Amsinckia lunaris*)
2, Calistoga ceanothus (*Ceanothus divergens*)
3, Calistoga popcornflower (*Plagiobothrys strictus*)
4, Clara Hunt's milk-vetch (*Astragalus claranus*)
5, Cobb Mountain lupine (*Lupinus sericatus*)
6, Colusa layia (*Layia septentrionalis*)
7, Green jewelflower (*Streptanthus hesperidis*)
8, Greene's narrow-leaved daisy (*Erigeron greenei*)
9, Holly-leaved ceanothus (*Ceanothus purpureus*)
10, Jepson's leptosiphon (*Leptosiphon jepsonii*)
11, Marsh checkerbloom (*Sidalcea oregana ssp. hydrophila*)
12, Napa bluecurls (*Trichostema ruygtii*)
13, Napa checkerbloom (*Sidalcea hickmanii ssp. napensis*)
14, Napa false indigo (*Amorpha californica var. napensis*)
15, Narrow-anthered brodiaea (*Brodiaea leptandra*)
16, Rincon Ridge ceanothus (*Ceanothus confusus*)
17, Sharsmith's western flax (*Hesperolinon sharsmithiae*)
18, Sonoma ceanothus (*Ceanothus sonomensis*)

Wildlife

1, American peregrine falcon (*Falco peregrinus anatum*)
2, Bald eagle (*Haliaeetus leucocephalus*)
3, California giant salamander (*Dicamptodon ensatus*)
4, Foothill yellow-legged frog (*Rana boylii*)
5, Fringed myotis (*Myotis thysanodes*)
6, North American porcupine (*Erethizon dorsatum*)
7, Obscure bumble bee (*Bombus caliginosus*)
8, Pallid bat (*Antrozous pallidus*)
9, Purple martin (*Progne subis*)
10, Steelhead - central California coast DPS (*Oncorhynchus mykiss irideus pop. 8*)
11, Townsend's big-eared bat (*Corynorhinus townsendii*)
12, Western pond turtle (*Emys marmorata*)

Critical Habitat

Northern Spotted Owl (*Strix occidentalis caurina*)
Steelhead (*Oncorhynchus mykiss*)



SOURCE: CDFW 2019, USFWS 2005/2012, Bing Maps 2019

DUDEK

0 3,000 6,000 Feet

FIGURE 3.4-4
CNDDB Occurrences
Hunter Subdivision Project

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Agenda Item #5.1.

Table 3.4-2
Special-Status Plant Species Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State/CRPR)[1]	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (Feet)[2]	Potential to Occur
Allium peninsulare var. *franciscanum*	Franciscan onion	None/None/1B.2	Cismontane woodland, Valley and foothill grassland; clay, volcanic, often serpentinite/perennial bulbiferous herb/(Apr)May–June/170–1,000	Not expected to occur. No clay, volcanic, or serpentinite soils present.
Alopecurus aequalis var. *sonomensis*	Sonoma alopecurus	FE/None/1B.1	Marshes and swamps (freshwater), Riparian scrub/perennial herb/May–July/15–1,200	Not expected to occur. No marsh or riparian scrub habitat present.
Amorpha californica var. *napensis*	Napa false indigo	None/None/1B.2	Broadleafed upland forest (openings), Chaparral, Cismontane woodland/ perennial deciduous shrub/Apr–July/390–6,560	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Amsinckia lunaris	bent-flowered fiddleneck	None/None/1B.2	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland, often serpentine/annual herb/Mar–June/5–1,640	Not expected to occur. The annual grassland onsite provides marginal habitat for this species due to a lack of serpentine soils and past and present anthropogenic disturbances at the site. Present mowing/vegetation management and past grading and agricultural uses of the site likely preclude the potential for this species to in the Project site. The plant survey did not identify the presence of the plant (see Appendix D).
Arctostaphylos manzanita ssp. *elegans*	Konocti manzanita	None/None/1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest; volcanic/perennial evergreen shrub/(Jan)Mar–May(July)/1,295–5,300	Not expected to occur. The site is outside of the species' known elevation range and there is no chaparral or woodland habitat present.
Arctostaphylos stanfordiana ssp. *decumbens*	Rincon Ridge manzanita	None/None/1B.1	Chaparral (rhyolitic), Cismontane woodland/ perennial evergreen shrub/Feb–Apr(May)/ 245–1,215	Not expected to occur. No chaparral or woodland habitat present.

Table 3.4-2
Special-Status Plant Species Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State/CRPR)[1]	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (Feet)[2]	Potential to Occur
Astragalus claranus	Clara Hunt's milk-vetch	FE/ST/1B.1	Chaparral (openings), Cismontane woodland, Valley and foothill grassland; serpentinite or volcanic, rocky, clay/annual herb/Mar–May/245–900	Not expected to occur. No serpentinite or volcanic, rocky, clay soils present.
Astragalus rattanii var. *jepsonianus*	Jepson's milk-vetch	None/None/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland; often serpentinite/ annual herb/Mar–June/ 965–2,295	Not expected to occur. The site is outside of the species' known elevation range.
Brodiaea leptandra	narrow-anthered brodiaea	None/None/1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; volcanic/perennial bulbiferous herb/May–July/360–3,000	Not expected to occur. The site is outside of the species' known elevation range.
Calycadenia micrantha	small-flowered calycadenia	None/None/1B.2	Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland; Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas/annual herb/June–Sep/15–4,920	Not expected to occur. No chaparral, meadows and seeps, or volcanic or serpentine soils with sparse vegetation present.
Castilleja ambigua var. *meadii*	Mead's owl's-clover	None/None/1B.1	Meadows and seeps, Vernal pools; Gravelly, volcanic, clay/annual herb (hemiparasitic)/Apr–May/1,475–1,560	Not expected to occur. The site is outside of the species' known elevation range.
Ceanothus confusus	Rincon Ridge ceanothus	None/None/1B.1	Closed-cone coniferous forest, Chaparral, Cismontane woodland; volcanic or serpentinite/ perennial evergreen shrub/ Feb–June/245–3,495	Not expected to occur. No forest, chaparral, or woodland habitat present.
Ceanothus divergens	Calistoga ceanothus	None/None/1B.2	Chaparral (serpentinite or volcanic, rocky)/ perennial evergreen shrub/Feb–Apr/555–3,115	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.

Table 3.4-2
Special-Status Plant Species Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State/CRPR)[1]	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (Feet)[2]	Potential to Occur
Ceanothus purpureus	holly-leaved ceanothus	None/None/1B.2	Chaparral, Cismontane woodland; volcanic, rocky/perennial evergreen shrub/Feb–June/390–2,100	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Ceanothus sonomensis	Sonoma ceanothus	None/None/1B.2	Chaparral (sandy, serpentinite or volcanic)/perennial evergreen shrub/ Feb–Apr/705–2,625	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Centromadia parryi ssp. *parryi*	pappose tarplant	None/None/1B.2	Chaparral, Coastal prairie, Meadows and seeps, Marshes and swamps (coastal salt), Valley and foothill grassland (vernally mesic); often alkaline/annual herb/May–Nov/0–1,380	Not expected to occur. No alkaline soils present within the vernally mesic areas of the annual grassland onsite.
Cryptantha dissita	serpentine cryptantha	None/None/1B.2	Chaparral (serpentinite)/ annual herb/Apr–June/1,295–1,905	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Downingia pusilla	dwarf downingia	None/None/2B.2	Valley and foothill grassland (mesic), Vernal pools/annual herb/Mar–May/0–1,460	Not expected to occur. No vernal pool habitat present.
Erigeron greenei	Greene's narrow-leaved daisy	None/None/1B.2	Chaparral (serpentinite or volcanic)/perennial herb/May–Sep/260–3,295	Not expected to occur. No chaparral habitat present.
Eryngium constancei	Loch Lomond button-celery	FE/SE/1B.1	Vernal pools/annual/perennial herb/Apr–une/1,505–2,805	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Eryngium jepsonii	Jepson's coyote thistle	None/None/1B.2	Valley and foothill grassland, Vernal pools; clay/perennial herb/Apr–Aug/5–985	Not expected to occur. No potential vernal pool habitat or clay soils present.
Fritillaria liliacea	fragrant fritillary	None/None/1B.2	Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland; Often serpentinite/perennial bulbiferous herb/Feb–Apr/5–1,345	Not expected to occur. No serpentine soils present in the annual grassland onsite.

Table 3.4-2
Special-Status Plant Species Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State/CRPR)[1]	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (Feet)[2]	Potential to Occur
Fritillaria pluriflora	adobe-lily	None/None/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland; often adobe/perennial bulbiferous herb/Feb–Apr/195–2,315	Not expected to occur. No adobe soils present within the annual grassland onsite.
Harmonia hallii	Hall's harmonia	None/None/1B.2	Chaparral (serpentinite)/ annual herb/Apr–June/1,000–3,200	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Hesperolinon bicarpellatum	two-carpellate western flax	None/None/1B.2	Chaparral (serpentinite)/ annual herb/ May–July/ 195–3,295	Not expected to occur. No chaparral habitat present.
Hesperolinon sharsmithiae	Sharsmith's western flax	None/None/1B.2	Chaparral; serpentinite/annual herb/May–July/885–985	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Juncus luciensis	Santa Lucia dwarf rush	None/None/1B.2	Chaparral, Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Vernal pools/annual herb/Apr–July/980–6,695	Not expected to occur. The site is outside of the species' known elevation range.
Lasthenia burkei	Burke's goldfields	FE/SE/1B.1	Meadows and seeps (mesic), Vernal pools/annual herb/Apr–June/45–1,970	Not expected to occur. No vernal pool habitat present.
Lasthenia conjugens	Contra Costa goldfields	FE/None/1B.1	Cismontane woodland, Playas (alkaline), Valley and foothill grassland, Vernal pools; mesic/annual herb/Mar–June/0–1,540	Not expected to occur. No vernal pool habitat or alkaline mesic areas present.
Layia septentrionalis	Colusa layia	None/None/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland; sandy, serpentinite/annual herb/Apr–May/325–3,595	Not expected to occur. The site is outside of the species' known elevation range.
Leptosiphon jepsonii	Jepson's leptosiphon	None/None/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland; usually volcanic /annual herb/Mar–May/ 325–1,640	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.

Table 3.4-2
Special-Status Plant Species Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State/CRPR)[1]	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (Feet)[2]	Potential to Occur
Limnanthes vinculans	Sebastopol meadowfoam	FE/SE/1B.1	Meadows and seeps, Valley and foothill grassland, Vernal pools; vernally mesic/annual herb/Apr–May/45–1,000	Not expected to occur. No vernal pool or vernally mesic habitat present.
Lupinus sericatus	Cobb Mountain lupine	None/None/1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial herb/Mar–June/900–5,005	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	None/None/1B.1	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools; Mesic/annual herb/Apr–July/15–5,710	Not expected to occur. No vernal pool or vernally mesic habitat present.
Navarretia leucocephala ssp. *pauciflora*	few-flowered navarretia	FE/ST/1B.1	Vernal pools (volcanic ash flow)/annual herb/ May–June/1,310–2,805	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Navarretia leucocephala ssp. *plieantha*	many-flowered navarretia	FE/SE/1B.2	Vernal pools (volcanic ash flow)/annual herb/ May–June/95–3,115	Not expected to occur. No potential vernal pool habitat present.
Navarretia myersii ssp. *deminuta*	small pincushion navarretia	None/None/1B.1	Vernal pools (clay loam)/ annual herb/Apr–May/ 1,160–1,165	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Navarretia paradoxinota	Porter's navarretia	None/None/1B.3	Meadows and seeps; Serpentinite, openings, vernally mesic, often drainages/ annual herb/May–June(July)/ 540–2,755	Not expected to occur. The site is outside of the species' known elevation range.
Navarretia rosulata	Marin County navarretia	None/None/1B.2	Closed-cone coniferous forest, Chaparral; serpentinite, rocky/annual herb/ May–July/ 655–2,085	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Penstemon newberryi var. *sonomensis*	Sonoma beardtongue	None/None/1B.3	Chaparral (rocky)/ perennial herb/Apr–Aug/2,295–4,495	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.

Table 3.4-2
Special-Status Plant Species Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State/CRPR)[1]	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (Feet)[2]	Potential to Occur
Plagiobothrys strictus	Calistoga popcornflower	FE/ST/1B.1	Meadows and seeps, Valley and foothill grassland, Vernal pools; alkaline areas near thermal springs/annual herb/Mar–June/295–525	Not expected to occur. No alkaline areas near thermal springs or vernal pool habitat present.
Poa napensis	Napa blue grass	FE/SE/1B.1	Meadows and seeps, Valley and foothill grassland; alkaline, near thermal springs/perennial herb/May–Aug/325–655	Not expected to occur. The site is outside of the species' known elevation range.
Puccinellia simplex	California alkali grass	None/None/1B.2	Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; Alkaline, vernally mesic; sinks, flats, and lake margins/ annual herb/Mar–May/5–3,050	Not expected to occur. No alkaline, vernally mesic, or lake margin habitat present.
Sagittaria sanfordii	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (assorted shallow freshwater)/ perennial rhizomatous herb (emergent)/May–Oct(Nov)/0–2,135	Not expected to occur. No potential habitat present.
Sidalcea hickmanii ssp. *napensis*	Napa checkerbloom	None/None/1B.1	Chaparral; rhyolitic/perennial herb/ Apr–June/1,360–2,000	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Sidalcea oregana ssp. *hydrophila*	marsh checkerbloom	None/None/1B.2	Meadows and seeps, Riparian forest; mesic/perennial herb/(June)July–Aug/3,605–7,545	Not expected to occur. The site is outside of the species' known elevation range.
Sidalcea oregana ssp. *valida*	Kenwood Marsh checkerbloom	FE/SE/1B.1	Marshes and swamps (freshwater)/perennial rhizomatous herb/June–Sep/375–490	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Spergularia macrotheca var. *longistyla*	long-styled sand-spurrey	None/None/1B.2	Meadows and seeps, Marshes and swamps; Alkaline/perennial herb/Feb–May/0–835	Not expected to occur. No meadows, seeps, marsh or swamp habitat present.

Table 3.4-2
Special-Status Plant Species Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State/CRPR)[1]	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (Feet)[2]	Potential to Occur
Streptanthus batrachopus	Tamalpais jewelflower	None/None/1B.3	Closed-cone coniferous forest, Chaparral; serpentinite/ annual herb/Apr–July/1,000–2,135	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Streptanthus brachiatus ssp. *brachiatus*	Socrates Mine jewelflower	None/None/1B.2	Closed-cone coniferous forest, Chaparral; usually serpentinite/perennial herb/May–June/1,785–3,280	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Streptanthus hesperidis	green jewelflower	None/None/1B.2	Chaparral (openings), Cismontane woodland; serpentinite, rocky/annual herb/May–July/425–2,495	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Streptanthus morrisonii ssp. *elatus*	Three Peaks jewelflower	None/None/1B.2	Chaparral (serpentinite)/ perennial herb/June–Sep/295–2,675	Not expected to occur. No chaparral habitat present.
Streptanthus vernalis	early jewelflower	None/None/1B.2	Closed-cone coniferous forest, Chaparral; serpentinite/ annual herb/Mar–May/2,000–2,000	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.
Trichostema ruygtii	Napa bluecurls	None/None/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland, Vernal pools/annual herb/June–Oct/95–2,230	Not expected to occur. No vernal pool habitat present.
Trifolium amoenum	two-fork clover	FE/None/1B.1	Coastal bluff scrub, Valley and foothill grassland (sometimes serpentinite)/ annual herb/Apr–June/15–1,360	Not expected to occur. No serpentine soils present in the annual grassland onsite.
Trifolium hydrophilum	saline clover	None/None/1B.2	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools/annual herb/Apr–June/0–985	Not expected to occur. No mesic, alkaline habitat present.
Viburnum ellipticum	oval-leaved viburnum	None/None/2B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial deciduous shrub/May–June/ 705–4,595	Not expected to occur. The site is outside of the species' known elevation range and there is no potential habitat present.

Sources: Jepson Flora Project (2019) and CNPS (2019).

Status Legend:
- FE: Federally listed as endangered
- FT: Federally listed as threatened
- SE: State listed as endangered
- ST: State listed as threatened
- CRPR 1A: Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere
- CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
- CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere
- CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- .1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Bent-flowered fiddleneck (*Amsinckia lunaris*). Bent-flowered fiddleneck is a CRPR 1B.2[1] species found in coastal bluff scrub, cismontane woodland, and valley and foothill grasslands between 5 and 1,640 feet above mean sea level (CNPS 2019). This species often occurs on serpentine soils (Jepson Flora Project 2019). Bent-flowered fiddleneck blooms March through June (CNPS 2019). The nearest documented CNDDB occurrence for this species is located approximately 2 miles southeast of the Project site (Figure 3.4-1) (CDFW 2019b). This occurrence is based on a March 2010 collection of the species in ruderal grassland at the edge of a vineyard located approximately 2 miles to the southeast (CDFW 2019b). Due to a lack of serpentine soils, as well as the disturbed nature of the Project site, and past grading activities associated with development of the vineyard and the nearby detention basin, there is only marginally suitable habitat for this species on the site. Surveys conducted by Dudek biologists and botanists in April 2019 and again in June 2020, were conducted within the period when this plant would be evident and identifiable. Dudek botanists did not find evidence of this species on the Project site, nor were any species within the genus *Amsinckia* observed during the surveys, which involved one focused survey for the plant conducted according to CDFW plant survey protocol (CDFW 2018; refer to Appendix D). This species is not anticipated to occur within the Proposed Project development footprint.

A polygon representing previously documented occurrences for Geene's narrow-leaved daisy (*Erigeron greenei*) and Clara Hunt's milk-vetch (*Astragalus claranus*) encompass the Project site; however, this polygon is large and non-specific and represents historic occurrences. These occurrences are old and likely extirpated as a result of development within the city limits (CDFW 2019b). Additionally, past disturbance and the ubiquity of non-native grass cover at the site likely precludes the presence of these sensitive species.

[1] CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere; 2 Fairly endangered in California (20%–80% occurrences threatened/moderate degree and immediacy of threat).

Special-Status Wildlife

Based on results of the surveys conducted by WRA and Dudek staff biologists, review of the databases and other relevant sources, 24 special-status wildlife species have been documented as occurring or potentially occurring in the vicinity of the Project site. Of these species, two are considered to have potential for occurrence (Palid Bat and White-Tailed Kite); they are identified in Table 3.4-3 and discussed below. The remaining special-status animals are not expected to occur on the Project site for varying reasons such as the absence of essential habitat requirements for the species, the distance to known occurrences, and/or the species distribution and elevation ranges.

Table 3.4-3
Special-Status Wildlife Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State)[1]	Habitat[2]	Potential to Occur
Fish				
Oncorhynchus mykiss irideus pop. 8	steelhead – central California coast DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	Not expected to occur. Although the Project site is located in the Napa River watershed, the site is not accessible to fish residing in the Napa River.
Oncorhynchus tshawytscha	Chinook – Napa River fall-run	None/None	Genetically similar to the Central Valley fall/late fall-run Evolutionary Significant Unit (ESU). Known to occur in the Napa River watershed (NCWICC 2019b).	Not expected to occur. Although the Project site is located in the Napa River watershed, the site is not accessible to fish residing in the Napa River.
Amphibians				
Dicamptodon ensatus	California giant salamander	None/SSC	Known from wet coastal forests and chaparral near streams and seeps from Mendocino Co. south to Monterey Co. and east to Napa Co. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	Not expected to occur. No stream or seep habitat in the present site. The nearest documented occurrence was observed in 2016 along Sulphur Creek, approximately 1.9 miles southwest of the Project site (CDFW 2019b).

Table 3.4-3
Special-Status Wildlife Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State)[1]	Habitat[2]	Potential to Occur
Rana boylii	foothill yellow-legged frog	None/PST, SSC	Rocky streams and rivers with open banks in forest, chaparral, and woodland	Not expected to occur. No rocky stream or river habitat in the Project site. The nearest documented occurrence was observed in 2015 approximately 0.3 miles southwest of the intersection of Pope Street and Silverado Trail, along Sulphur Creek (CDFW 2019b).
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent habitat associated with deep, still or slow-moving water; uses adjacent uplands	Not expected to occur. There is no breeding habitat for this frog at the Project site. The Riparian woodland along Napa River may provide dispersal and/or migration habitat; however, the nearest documented occurrence of this species is located greater than 9 miles west of the Project site (CDFW 2019b).
Taricha rivularis	red-bellied newt	None/SSC	Redwood forests (and sometimes other forest types) along coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean rocky substrate.	Not expected to occur. No redwood forest or breeding habitat present.

Table 3.4-3
Special-Status Wildlife Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State)[1]	Habitat[2]	Potential to Occur
		Reptiles		
Actinemys marmorata	western pond turtle (WPT)	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No aquatic habitat present. The detention basin just north of the site does not contain sufficient water during the active season to support WPT. The nearest potential aquatic habitat for WPT is in Napa Creek, which is nearly 600 feet from the site. Given the lack of aquatic habitat on and adjacent to the site, it is unlikely WPT would disperse through the Project site or remain present for nesting or overwintering purposes. The nearest documented occurrence is in Conn Creek adjacent to Lake Hennessy, approximately 3.5 miles southeast of the site (CDFW 2019b). No WPT, nor their sign, were observed on the Project site during the 2011, 2015, 2018, and 2019 biological fieldwork.
		Birds		
Accipiter striatus (nesting)	sharp-shinned hawk	None/WL	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats	Not expected to occur. No coniferous forest, black oak, or woodland nesting habitat present.

Table 3.4-3
Special-Status Wildlife Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State)[1]	Habitat[2]	Potential to Occur
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SE, SSC	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. Although the annual grassland onsite may provide foraging habitat, no breeding habitat for this species is present within or adjacent to the Project site. The nearest documented occurrence of this species was observed in 2014 approximately 7.8 miles northeast of the Project site (CDFW 2019b).
Aquila chrysaetos (nesting & wintering)	golden eagle	BCC/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to occur. No breeding habitat present. The nearest documented occurrence is located greater than 10 miles southwest of the Project site (CDFW 2019b).
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. Although the grassland at the Project site may provide breeding and foraging habitat, no suitable burrows for this species were observed during the biological site surveys. The nearest documented occurrence for this species is located greater than 12 miles southwest of the Project site (CDFW 2019b).

Table 3.4-3
Special-Status Wildlife Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State)[1]	Habitat[2]	Potential to Occur
Buteo swainsoni (nesting)	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. Although the Project site provides potential foraging habitat, the site is outside the geographic range of this species and there are no suitable nesting trees present. The nearest documented occurrence is located along the Napa River just south of Rutherford, approximately 5.2 miles southeast of the Project site (CDFW 2019b).
Cypseloides niger (nesting)	black swift	BCC/SSC	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	Not expected to occur. The Project site is outside the geographic range of this species, and there is no cave or cliff nesting habitat present.
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Low potential to occur. Trees on the perimeter of the Project site and directly offsite to the north may provide nesting habitat for this species. Grassland at the Project site may provide foraging habitat for this species. The nearest documented occurrence for this species is located approximately 8 miles southeast of the Project site (CDFW 2019b).

Table 3.4-3
Special-Status Wildlife Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State)[1]	Habitat[2]	Potential to Occur
Falco mexicanus (nesting)	prairie falcon	BCC/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Not expected to occur. Although grassland at the Project site provides potential foraging habitat, there is no nesting habitat present onsite or in the vicinity. The nearest documented occurrence is approximately 8.4 miles northwest of the Project site (CDFW 201b9).
Falco peregrinus anatum (nesting)	American peregrine falcon	FDL, BCC/SDL, FP	Usually nests on high cliffs, dunes, buildings, bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Not expected to occur. No nesting or foraging habitat present. The nearest documented occurrence is located in habitat consisting of small, volcanic cliffs, approximately 2 miles west of the Project site (CDFW 2019b).
Haliaeetus leucocephalus (nesting & wintering)	bald eagle	FDL, BCC/SE, FP	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	Not expected to occur. No suitable large trees for nesting or aquatic hunting habitat present.
Pandion haliaetus (nesting)	osprey	None/WL	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	Not expected to occur. No suitable large trees for nesting or aquatic hunting habitat present.
Phalacrocorax auritus (nesting colony)	double-crested cormorant	None/WL	Nests in riparian trees near ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries,	Not expected to occur. No suitable large trees for nesting or aquatic hunting habitat present.

Table 3.4-3
Special-Status Wildlife Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State)[1]	Habitat[2]	Potential to Occur
			and open coastlines; winter habitat includes lakes, rivers, and coastal areas	
Progne subis (nesting)	purple martin	None/SSC	Nests and forages in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways	Not expected to occur. Although there are documented occurrences in the vicinity of the Project site (CDFW 2019b), there is no nesting or foraging habitat present onsite.
Strix occidentalis caurina	northern spotted owl	FT/ST	Nests and forages in dense, old growth forests with a complex, multi-layer canopy; prefers narrow, steep-sided canyons with north-facing slopes in northern California	Not expected to occur. No nesting or foraging habitat present.
Fish				
Hypomesus transpacificus	Delta smelt	FT/SE	Sacramento–San Joaquin Delta; seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay	Not expected to occur. The site is outside of the species' known geographic range and there is no potential habitat present.
Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	Not expected to occur. There is no aquatic habitat present. Although the Project site is located in the Napa River watershed, the site is not accessible to fish residing in the Napa River.
Oncorhynchus tshawytscha	Chinook – Napa River fall-run	None/None	Genetically similar to the Central Valley fall/late fall-run Evolutionary Significant Unit (ESU). Known to occur in the Napa River watershed (NCWICC 2019b)	Not expected to occur. There is no aquatic habitat present. Although the Project site is located in the Napa River watershed, the site is not accessible to fish residing in the Napa River.

Table 3.4-3
Special-Status Wildlife Occurrence Potential on the Project Site

Scientific Name	Common Name	Status (Federal/State)[1]	Habitat[2]	Potential to Occur
		Mammals		
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in built structures and trees; extremely sensitive to disturbance of roosting sites	Low potential to occur. The Project site lacks roosting habitat due to ongoing anthropogenic activity in the vicinity. Grassland at the Project site could provide potential foraging habitat, although use of the site for foraging is unlikely given the lack of roosting habitat in the surrounding area.
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, built structures, and tunnels; extremely sensitive to disturbance of roosting sites	Not expected to occur. No suitable caves, lava tubes, or tunnels for roosting. Ongoing anthropogenic activity at adjacent residences likely preclude roosting on residential properties.
		Invertebrates		
Syncaris pacifica	California freshwater shrimp	FE/SE	Endemic to Marin, Napa, and Sonoma Counties; found in low-elevation, low-gradient streams where riparian cover is moderate to heavy	Not expected to occur. No low-gradient, freshwater stream habitat present.

Sources: CDFW 2019c.
Status Abbreviations

FE: Federally Endangered
FT: Federally Threatened
PFE: Proposed Federally Endangered
PFT: Proposed Federally Threatened
FC: Federal Candidate
FDL: Federally Delisted
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
BLM: Bureau of Land Management Sensitive Species
USFS: U.S. Forest Service Sensitive Species
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
SE: State Endangered
ST: State Threatened
PSE: Proposed State Endangered
PST: Proposed State Threatened
SDL: State Delisted
SS: List Special Animals List, but no other status
CDF: California Department of Forestry Sensitive Species

Native bats [including Pallid Bat (*Antrozous pallidus*)]. Pallid bats, a California Species of Special Concern, are widespread throughout the western United States; southern British Columbia, Canada; and mainland and Baja California, Mexico (Hermanson and O'Shea 1983; Hall 1981). Within the United States, it ranges east into southern Nebraska, western Oklahoma, and western Texas. The pallid bat is locally common in arid deserts and grasslands throughout the western United States, and occurs in shrublands, woodlands, and forests at elevations up to 8,000 feet (Hermanson and O'Shea 1983; Hall 1981). Although this species prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging, it has been observed far from such areas (Hermanson and O'Shea 1983). Pallid bat day roosts of single- or mixed-sex colonies, often including greater than 20 individuals and sometimes more than 200 individuals, usually are established in crevices or built structures (Hermanson and O'Shea 1983). This species has also been observed using live trees and snags for day and night roosts; however, preference appears to be for tall, large-diameter trees located in mature stands with low overstory cover (Baker et al. 2008).

Pallid bats forage for a variety of species, including flightless arthropods picked up from the ground (e.g., scorpions and ground crickets), insects gleaned from vegetation (e.g., cicadas), insects taken in flight, and small vertebrates that are taken on the ground. Although the species is capable of flying more than 18 miles, most foraging occurs within about 2 miles of the day roost (Hermanson and O'Shea 1983).

While mature trees north and east of the site along the Napa River, as well as barns and other agricultural buildings to the north of the site may provide roosting habitat for this species, the absence of caves, mines, rocky outcrops, and cliffs, as well as past development and current human uses of the site limits habitat suitability. The grassland onsite provides potential foraging habitat for these species. The CNDDB lists a sighting of pallid bat approximately 0.34 miles northeast of the Project site; however, this occurrence is very old (1953) and no bats or signs of bats were observed on the Project site during field surveys (CDFW 2019b). It is unlikely any bat species would occur on the site given the ruderal nature of potential roosting habitat, the history of disturbance, and the lack of proper hydrology and topography for preferred foraging.

Other native bats, such as silver-haired bat (*Lasionycteris noctivagans*) and fringed myotis (*Myotis thysanodes*) have a potential to forage and/or roost in the vicinity of the Project site. These species are protected by California Fish & Game Code Section 4150.

White-tailed Kite (*Elanus leucurus*). The white-tailed kite is a California Fully Protected species. It is commonly associated with certain types of agriculture areas (Grinnell and Miller 1944). It also generally occurs in low-elevation grassland, wetland, oak woodland, low shrub, open woodlands, or savannah habitats. It is tolerant of moderate disturbance, such as occurs near residential subdivision developments. This species also uses fencerows and irrigation ditches

(with residual vegetation). Riparian areas adjacent to open space areas are typically used for nesting, where kites prefer dense, broadleafed deciduous trees for nesting and night roosting (Brown and Amadon 1968). They also nest in young redwoods and mid-sized Douglas firs in Northern California.

White-tailed kite was not observed by WRA or Dudek biologists during the site surveys. The nearest documented occurrence for this species is approximately 7.8 miles southeast of the Project site. However, mature trees along the eastern boundary and trees located north of the Project site provide potential nesting habitat for this species. The riparian tree canopy associated with the Napa River, approximately 500 feet northeast of the Project site, also provides potential nesting habitat for white-tailed kite, and grasslands within the Project site provide potential foraging habitat for this species.

3.4.3 Regulatory Setting

Federal Regulations

Federal Endangered Species Act

Section 9 of the FESA protects federally-listed endangered and threatened wildlife species from unlawful take (16 USC Section 1538(a)(1)). “Take” is defined to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 USC Section 1532(19)). In addition, federal agencies are required to determine whether a project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat designated for such species (16 USC 1536[3], [4]). Projects that would result in “take” of any federally listed threatened or endangered species are required to obtain authorization from the National Marine Fisheries Service and/or USFWS through either Section 7 (interagency consultation) or section 10(a) (incidental take permit) of the FESA, depending on whether the federal government is involved in permitting or funding that project.

No federally listed threatened or endangered species are anticipated to occur within the Project site. As a result, the provisions of the FESA would not apply to the Proposed Project.

Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, “take” is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, Department of Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA to only prohibit intentional take. Similarly, the Ninth Circuit Court of

Appeals, like the Fifth Circuit and the Eighth Circuit, has held that the MBTA applies only to intended takes. See Seattle Audubon Soc'y v. Evans, 952 F.2d 297, 303 (9th Cir. 1991). Unintentional or accidental take is not prohibited. In January 2021, USFWS published in the Federal Register the final regulation codifying the interpretation of the 2017 memorandum. This rule has an effective date of March 8, 2021, unless the USFWS opts to amend, rescind, or delay the rule. Regardless, USFWS reviews actions that might affect these species.

Birds may use vegetation communities or land cover types within the Project site for nesting. Intentional take of any of these birds or their nests and young, if present, is prohibited under the MBTA.

Clean Water Act

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of waters of the United States (as defined in the Code of Federal Regulations [CFR]: 33 CFR 328.3[a]). Section 401 of the Act (33 USC 1341) prohibits the discharge of any pollutant into waters of the United States. Project applicants for a federal license or permit to conduct activities including, but not limited to, the creation or operation of facilities, which may result in discharge into waters of the United States, must obtain certification that a project would not violate applicable effluent limitations and water quality standards. Section 404 of the Act (33 USC 1344) requires a federal license or permit from USACE prior to the discharge of dredge or fill material into waters of the United States, unless the activity is exempt from Section 404 permit requirements. Permit applicants must demonstrate that they have attempted to avoid or minimize impacts on the resource; however, if no further minimization of impacts is possible, the applicant is required to mitigate remaining impacts on all federally regulated waters of the United States. In California, the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards are responsible for the protection of water quality.

Based on a delineation of wetlands and other waters of the United States (Dudek 2019), seasonal wetlands and ditches within the Project site are not anticipated to be jurisdictional under Section 404 of the Clean Water Act as they are isolated and lack connectivity to any downstream waters of the United States. These features may be considered waters of the state and would be regulated by the Regional Water Quality Control Board under Section 401 of the Clean Water Act.

State Regulations

California Endangered Species Act

The CESA and Section 2081 of the California Department of Fish and Game Code identifies measures to ensure state-listed species and their habitats are conserved, protected, restored,

and enhanced. The Act requires permits from the CDFW for activities that could result in the take of a state-listed threatened or endangered species. “Take” is defined as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86). Section 2080 of the Fish and Game Code prohibits the take of state-listed plants and animals unless otherwise permitted under Sections 2080.1, 2081, and 2835. Section 20814(b) affords CDFW the authority to issue permits for incidental take for otherwise lawful activities. To authorize an incidental take, the impacts of the take must be minimized and fully mitigated. Issuance of incidental take permits may not jeopardize the continued existence of a state-listed species. For species listed as threatened or endangered under FESA, CDFW may rely on a federal incidental take statement or permit to authorize an incidental take under CESA.

The California Fish and Game Commission maintains a list of threatened and endangered species (Fish and Game Code Section 2070). The California Fish and Game Commission maintains two additional lists: a Candidate species list, which identifies species under review for addition to either the endangered or threatened species list, and a Species of Special Concern list which serves as a watch list based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value.

No state-listed threatened or endangered species are anticipated to occur within the Project site. As a result, the provisions of the CESA would not apply to the Project Proposed.

California Fully Protected Species and Species of Special Concern

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. California Fish and Game Code sections (fish at Section 5515, amphibians and reptiles at Section 5050, birds at Section 3511, and mammals at Section 4700) dealing with “fully protected” species state that these species may not be taken or possessed at any time, and no provisions in this code or any other law shall be construed to authorize permits for the take of fully protected species.

In October 2011, the State passed legislation allowing take of a fully protected species covered under an approved Natural Community Conservation Plan. Species of Special Concern are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing, or they historically occurred in low numbers and known threats to their persistence currently exist. This classification is intended to elicit special consideration for these animals by the CDFW, land managers, consulting biologists, and others. Additionally, this classification is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them.

One California Fully Protected species, white-tailed kite, has the potential to use the Project site for foraging. Potential nesting habitat is present in trees adjacent to the southeast boundary of the Project site and offsite, but within sound and visual range of the Project site. Take of this species, including harm or harassment of any kind, is not permitted.

California Department of Fish and Game Code Sections 3503 and 4150

Birds of prey are protected in California under the Fish and Game Code Section 3503.5 (1992). Under Section 3503.5, it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (diurnal birds of prey) or Strigiformes (owls) or to take, possess, or destroy any nest or egg of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Disturbance during breeding season that results in the incidental loss of fertile eggs or nestlings or otherwise leads to nest abandonment is considered "taking" by the CDFW.

There is potential for common raptor species such as red-tailed hawk (*Buteo jamaicensis*) and great horned owl (*Bubo virginianus*) to use mature trees for nesting to the north and east of the Project site, primarily along the Napa River corridor. If present offsite but within visual and auditory range of the Project site, nests of these species are protected during the breeding season.

Fish and Game Code Section 4150 states a mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a nongame mammal. A nongame mammal may not be taken or possessed under this code. All bat species occurring naturally in California are considered nongame mammals and are therefore prohibited from take as stated in Fish and Game Code Section 4150.

There is a potential for native bats to forage in the Project site and/or roost in the vicinity. If these species are present during construction, measures must be implemented to avoid take of these species.

California Native Plant Protection Act

The California Native Plant Protection Act (California Fish and Game Code Sections 1900–1913) and the Natural Communities Conservation Planning Act provide guidance on the preservation of plant resources. Vascular plants which have no designated status or protection under state or federal endangered species legislation, but are ranked as rare or endangered by the CNPS, are defined as follows:

1. Rank 1A: Plants presumed extinct
2. Rank 1B: Plants rare, threatened, or endangered in California and elsewhere
3. Rank 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere

4. Rank 3: Plants about which more information is needed – a review list
5. Rank 4: Plants of limited distribution – a watch list

Generally, plants with a CRPR of 1A, 1B, or 2 are considered to meet the criteria for endangered, threatened, or rare species as outlined by Section 15380 of the CEQA Guidelines. Additionally, plants listed on CNPS List 1A, 1B, or 2 also meet the definition of Section 1901, Chapter 10 (Native Plant Protection Act) and Sections 2062 and 2067 (CESA) of the California Fish and Game Code.

One plant, bent-flowered fiddleneck, has a CRPR of 1B and has low potential to occur within the grassland habitat on the Project site; however, it was not observed within the site during site surveys conducted when it would be evident and identifiable. Plants protected under the Native Plant Protection Act are not anticipated to be present at the Project site. As a result, the provisions of the Native Plant Protection Act would not apply to the Proposed Project.

California Department of Fish and Game Code Sections 1600–1616

Under Sections 1600–1616 of the California Fish and Game Code, CDFW regulates activities that would substantially alter the flow, bed, channel, or bank of streams and lakes. Such activities require a 1602 Lake and Streambed Alteration Agreement from CDFW. The California Code of Regulations (CCR) defines a stream as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). The term “stream” includes rivers, creeks, ephemeral streams, dry washes, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Removal of riparian vegetation also requires a Section 1602 Lake and Stream Alteration Agreement from CDFW.

Because ditches on the Project site contain a defined bed and bank and flow periodically, they are potentially regulated under Sections 1600–1616 of the California Fish and Game Code. Alteration of ditches onsite would require a Section 1602 Stream Alteration Agreement from CDFW. It is anticipated the Proposed Project would not fill or remove any of the existing ditches located adjacent to the Proposed Project boundaries.

State Water Resources Control Board

The SWRCB administers Section 401 of the Clean Water Act which requires that an applicant for a Clean Water Act Section 404 permit first obtain a certification, or waiver thereof, that a project will not violate applicable state water quality standards. The authority to either grant certification or

waive the requirement for certification has been delegated by the SWRCB to nine regional boards, including, in St Helena, the San Francisco Bay Regional Water Quality Control Board. The SWRCB protects all waters of the state, but has special responsibility for isolated wetlands and headwaters. These water bodies have high resources value but are vulnerable to filling and may lack regulation by other programs. Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the state are required to comply with the terms of the Water Quality Certification Program. If a project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the state, the water boards have the option to regulate such activities under its state authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

Seasonal wetlands and ditches within the Project site may be considered waters of the state and fall within the jurisdiction of the SWRCB. Discharge in these features would require regulation in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

Local Regulations

City of St. Helena 1993 General Plan

The Open Space and Conservation Element of the St. Helena 1993 General Plan provides guiding and implementing policies regarding biological resources, including the following:

> **Policy 6.2.3:** Protect the riparian vegetation and habitat value of the City's stream corridors by requiring development setbacks and open space easements along the Napa River, Sulphur Creek, York Creek, and Spring Creek.
>
> **Policy 6.2.10:** Protect natural habitats which have the potential to support rare, endangered, or special status wildlife and plant species.
>
> **Implementing Policy 6.2.13:** Require new development to be sited to maximize the protective tree species, riparian vegetation, important concentrations of natural plants, and important wildlife habitat.
>
> **Implementing Policy 6.2.14**: Require all proposed projects adjacent to a riparian corridor or located in the City's hillside areas, to submit management plans for protecting natural habitat values, including provisions to:
>
> - Employ supplemental planting and maintenance of grasses, shrubs and trees of similar quality and quantity to provide adequate vegetation cover to keep the watersheds, on steep slopes and along streams, in good condition and to provide shelter and food for wildlife.

- Provide protection for wildlife habitat.
- Provide replacement habitat of like quantity and quality.

Implementing Policy 6.2.15: Require a biological assessment of any proposed project site where species or the habitat of species defined as sensitive or special status by the California Department of Fish and Game or the U.S. Fish and Wildlife Service might be present.

Policy 6.4.11: Integrate existing significant trees into future development.

Policy 6.4.12: Require replacement trees where existing significant trees cannot be saved.

Policy 6.4.13: Require street trees as a condition of new development.

City of St. Helena 2019 General Plan ("General Pan Update 2040")

The Open Space and Conservation Element of the St. Helena 2019 General Plan provides policies regarding biological resources, including the following:

Policy OS1.1: Preserve and enhance St. Helena's riparian corridors for their value in providing wildlife habitat, biodiversity, natural drainage, and visual amenity.

Policy OS1.2: Prohibit development, alteration, and/or removal of native vegetation from riparian areas. Disallow invasive species that degrade habitat quality.

Policy OS1.3: Protect and enhance contiguous corridors of riparian vegetation along the Napa River and its tributaries in order to support regional wildlife movement and enhance aquatic habitat.

Policy OS1.4: Protect natural habitats that have the potential to support rare, endangered, or special-status wildlife and plant species. Control invasive species that degrade habitat quality.

Policy OS1.5: Restrict development of hillside areas in order to protect wildlife, vegetation, viewsheds, and open space characteristics.

Policy OS1.6: Manage invasive species that degrade habitat quality, especially along the Napa River and its tributaries.

Policy OS1.7: Promote, encourage, and require sustainable agricultural practices that are sensitive to natural habitat and do not harm wildlife.

Policy 6.4.12: Require replacement trees where existing significant trees cannot be saved.

Policy 6.4.13: Require street trees as a condition of new development.

St. Helena Municipal Code

Title 12, Chapter 12.24 of the St. Helena Municipal Code protects trees and other vegetation within the City by executing provisions to protect protected trees. Protected trees include heritage trees, protected replacement trees, street trees, and city trees (Section 12.24.020). Heritage trees are defined as "any tree or grove of trees within the city boundaries designated by a resolution of the city council and having met the requirements set for in [Chapter 12.24, Section 12.22.020]."

Section 12.24.130 provides guidance for pruning, maintenance and removal of any protected trees, while Sections 12.24.140 and 12.24.150 address damage to protected trees and protection of trees during and after construction.

No tree removal is anticipated as a result of the Proposed Project. There are multiple oak trees on the banks of the ditch that runs along the southeast boundary of the Project site, near Del Rio Court. These trees would be retained and would not be removed to accommodate the Proposed Project.

3.4.4 Impacts

Methods of Analysis

The following resource databases and documents were reviewed in the course of preparing the biological resources review for the Proposed Project to establish the existing conditions as they relate to biological resources including plant and wildlife species, vegetation, and wetland and water resources. This review was supplemented with field observations as part of the previous biological resources studies conducted by WRA in 2011 and 2015, and reconnaissance surveys conducted by Dudek in 2018, 2019, and 2020.

- North Fork Associates. 2006. Wetland Delineation for the ±16-acre Hunter-St. Helena Property, St. Helena, Napa County, California. Technical Report. September 12, 2006.
- WRA 2015. Hunter Subdivision Project, St. Helena, CA. Technical Letter Report. September 15, 2015.
- Updated queries of the CNDDB (CDFW 2019), CNPS's Inventory of Rare and Endangered Vascular Plants (CNPS 2019), and the USFWS Information for Planning and Consultation (IPaC) occurrence data (USFWS 2019).

- Dudek. 2019. Preliminary Jurisdictional Delineation of Wetlands and Waters of the United States: Hunter Subdivision Project, Napa County, California. Technical Report.
- Dudek. 2020. Rare Plant Survey Results for the Hunter Subdivision Project. Memorandum.

CEQA requires that projects analyze the potential impacts on special-status plant and wildlife species, as well as on sensitive habitats, wildlife corridors, and waters of the United States. Impacts on wildlife species that are not considered special-status under CEQA are generally not considered significant unless impacts are associated with the species' migration routes or movements, or the species are considered locally important. In the area surrounding the Project site, other common species (e.g., skunk, raccoon, possum, deer) would not be considered special-status species; however, impacts on their movements and migration routes would be considered significant under CEQA. Regardless of status, all nesting native bird species are protected from harm under the state Fish and Game Code and the federal MBTA.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Threshold Criteria not Applicable to the Proposed Project

Due to the location and characteristics of the Proposed Project, certain significance criteria are not applicable and therefore, are not considered potential impacts. These criteria are addressed briefly below and are not discussed further in this document.

Sensitive Natural Communities

As discussed in Section 3.4.2 Environmental Setting, there are no natural communities identified as sensitive by CDFW and the USFWS within the Project site. The natural communities present onsite are not regulated by CDFW, USFWS, regional plans, or policies. Because the Project site lacks sensitive natural communities, there would be no impact and this issue (second significance threshold listed above) is not further addressed.

Conflict with any Local Policies or Ordinances Protecting Biological Resources

The Proposed Project would not conflict with applicable 1993 General Plan policies and city ordinances designed to protect biological resources including habitat (see Section 3.4.3, Regulatory Setting). For example, no tree removal is required; therefore, the Proposed Project would not need to obtain a tree permit. As such, there would be no impacts and this issue (fifth significance threshold listed above) is not further addressed.

Habitat Conservation Plan/Natural Communities Conservation Plan

The Proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Because the Project site is not located in an area subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other similar plan, there would be no impacts and this issue (last significance threshold listed above) is not further addressed.

Impacts and Mitigation Measures

3.4-1: Would the Proposed Project have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? This impact would be potentially significant.

As discussed above and in Section 3.4.2, Environmental Setting, habitat for special-status species is generally limited in the Project site. The site is seasonally mowed/disked, and in 2010, approximately 2 feet of clean fill was spread across the site in support of the Napa River Flood Control Project. Given the disturbed nature of the site, and its proximity to frequent human

disturbance (e.g., residences and dog walkers), the site has a low potential to support sensitive plant and wildlife species. The few resources that have potential to occur are discussed below, including any potential impacts to these resources as a result of future development.

Special-Status Plants

No federal or state-listed plant species have the potential to occur onsite. One CRPR 1B.2 species, bent-flowered fiddleneck (*Amsinckia lunaris*), has the potential to occur onsite, but the likelihood of occurrence is low (see Section 3.4.2 for details). No evidence of the plant was identified on the Project site during the focused plant survey conducted in June 2020. The survey followed recommended methodology described in the CDFW Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). The timing of the survey was such that bent-flowered fiddleneck would be evident and identifiable. In addition, bent-flowered fiddleneck was not identified on the Project site during multiple surveys conducted by biologists and botanists since 2006, including site visits during the bloom period in March and April (refer to Appendix D). Because the plant is not present on the site, the potential direct impact is considered **less than significant.**

Special-Status Wildlife

Comments received in response to the Notice of Preparation included concerns over potential impacts to salmonids (a grouping of fish that includes steelhead trout and salmon) residing in the Napa River. A summary of why the Proposed Project development would not adversely impact salmonids is provided below.

Salmonids: The Project site is located within the Napa River watershed; however, the Project site is not located adjacent to the river and there is no aquatic habitat for salmonids within the Project site (including central California coast steelhead DPS [distinct population segment] and fall-run Chinook salmon). The Central California coast steelhead DPS (hereafter 'steelhead') and fall-run Chinook salmon (hereafter 'Chinook') are known to occur in the Napa River, located approximately 500 feet north/northeast of the Project site. Although aquatic habitat for steelhead and Chinook is present in the Napa River, there are no fish passage opportunities between the Napa River and the Project site. As such, no direct impacts to steelhead would occur as a result of the Proposed Project.

Indirect impacts to steelhead and Chinook during construction, such as those related to water quality, are not expected to occur. Indirect impacts to salmonids as a result of poor water quality are limited to instances when salmonids are exposed to relatively high quantities of pollutants for prolonged periods of time (Bisson and Bilby 1982; Sigler et al. 1984). It is extremely unlikely that water quality stressors associated with Proposed Project construction activities such as increased turbidity or pollutants would enter the Napa River at a quantity that would harm

salmonids. The Project site does not drain directly into the Napa River, instead draining to an existing City-owned detention basin located adjacent to the site with a low-flow outlet to the Napa River. This lack of direct drainage would provide additional buffering of any discharge from Proposed Project construction, allowing additional time for mixing, settling, or other amelioration of pollutant concentrations before entering the river. Considering these factors, together with mixing provided by Napa River flows, any waterquality stressors generated by Proposed Project construction would not be expected to remain present for a prolonged time (i.e., several hours to days), further limiting potential for indirect harm to salmonids. Implemention of Proposed Project permitting requirements and conditions of approval, such as those discussed in Section 3.9 Hydrology and Water Quality would be sufficient to avoid water quality degradation, meet water quality standards and Basin Plan objectives, and prevent adverse effects on salmonids during Proposed Project construction.

Indirect impacts to steelhead and Chinook as a result of Proposed Project operation are also not anticipated. As discussed Section 3.9, Hydrology and Water Quality, the Proposed Project would result in impervious surface area as compared to existing conditions, which has the potential to increase storm water runoff rates and transport of accumulated pollutants to surface waters. However, the Proposed Project is not expected to adversely impact surface waters via storm water runoff, as all development would be subject to the most recent standards and performance criteria contained in the City's Small Municipal Separate Storm Sewer System (MS4) Permit (described in Section 3.9.3, Regulatory Setting). Further, the Proposed Project's grading plan includes all the elements necessary to demonstrate it can successfully comply with post construction MS4 Permit requirements. The Small MS4 Permit requires the Proposed Project to prepare and submit for City approval a Stormwater Control Plan that complies with the Bay Area Stormwater Management Agencies Post Construction Manual. Best management practices listed in the grading plans would be implemented including water quality features such as downspouts to landscaped swales; vegetated swales; hydrodynamic oil, water and solid separators; private street sweeping; labeled storm drains ("drains to river") and homeowner educational materials on stormwater pollution prevention are best management practices to be implemented to prevent storm runoff of poor quality from entering the Napa River or seeping into the underlying groundwater table. For more details regarding the specific best management practices proposed, refer to Section 3.9.4 (Hydrology and Water Quality; Impacts). Compliance with these requirements would prevent indirect impacts to salmonids during Proposed Project operation.

Additionally, as discussed in Section 3.9, according to the groundwater basin assessment report, groundwater pumping is a relatively small outflow component compared to surface water stormflows and groundwater baseflow discharged to the Napa River. Therefore, the basin groundwater is dominated more by precipitation than it is by groundwater pumping and the proposed groundwater pumping by the Project would be expected to have a negligible effect on flows in the Napa River (LSCE 2016). This includes any indirect impacts to salmonids within the Napa River.

No federal or state-listed wildlife species have the potential to occur onsite. Only two special-status wildlife species have the potential to occur onsite; these species are addressed below.

White-tailed kite: There is potential for white-tailed kite to use trees along the southeastern margins of the Project site or directly north of the Project site for nesting. No white-tailed kites have been observed on or near the Project site during the 2011, 2015, 2018, and 2019 biological surveys of the site. However, should white-tailed kite be breeding near the site prior to Proposed Project initiation, construction-related activities could potentially cause an adult kite to abandon an active nest that is in close proximity to the construction area and therefore leave eggs or chicks vulnerable to predation or without provisions. In addition, increased noise, glare, and lighting associated with Proposed Project operation could result in indirect impacts to nesting habitat for this species. However, noise levels associated with Proposed Project operation would be well within the City's noise thresholds and would be typical of noise from existing residential land uses directly south and west of the Project site; refer to Section 3.11, Noise and Vibration, for a full discussion.

No tree removal is proposed as part of the Proposed Project, so no direct impacts, such as mortality and/or injury to nesting kites, is anticipated. However, the potential indirect impacts associated with construction and operation of the Proposed Project are considered substantial effects on a special-status species and, therefore, would be considered a **potentially significant impact.**

Native bats (including pallid bat): There is a low potential for native bats, including pallid bat, to roost onsite. Roosting habitat, such as rock outcrops, trees, caves, and human-made structures, are absent from the Project site. Moreover, pallid bat is unlikely to roost on or near the site due to frequent human disturbance (see Section 3.4.2 for details). However, there are trees and buildings near the Project site that provide potential roosting habitat for bats, and onsite grassland could be used for foraging by these species, or others roosting within dispersal distance of the Project site.

Should native bats roost near the site or use the on-site grassland for foraging, they could be impacted by the Proposed Project. If bats were to roost in the area during construction, they could be indirectly impacted by construction-related noise. Potential direct impacts from noise include acute acoustic trauma, degradation of physiological condition and social order, avoidance of foraging areas, and disturbance from and/or abandonment of roost sites. In particular, loud ultrasonic noise (i.e., having frequencies above the range of human hearing >20 kilohertz) can deter bats from accessing and using known roosts [Caltrans 2016]). Depending on noise attenuation rates and other factors, construction equipment such as graders, dozers, and diesel engines can produce sound sufficient to disturb roosting bats.

Indirect impacts to roosting bats could also result from increased noise, light, glare, and activity associated with Proposed Project operation; however, noise levels would be within City thresholds and lighting associated with the Proposed Project would adhere to guidelines and standards set forth in Mitigation Measure AES-1 (see Section 3.1, Aesthetics) that would reduce glare and spillover light. Such standards include, but are not limited to, shielded and downward focused lighting, limited up-cast decorative lighting, and no use of mirrored glass .

No direct impacts to roosting bats are anticipated as potential roost sites, such as the trees along the southeastern margin of the site, would be avoided by the Proposed Project. However, the potential indirect impacts associated with construction and operation of the Proposed Project are considered substantial effects on a special-status species and, therefore, would be considered a **potentially significant impact** pursuant to the CEQA significance thresholds identified above.

Nesting and Migratory Birds

Trees, shrubs, grassland, and vineyards on or adjacent to the Project site provide potential nesting habitat for bird species protected under the MBTA and the California Fish and Game Code Section 3500. The quality of nesting habitat on the Project site is marginal due to regular mowing of the grassland and cultivation of the vineyard and lack of trees. No active nests were documented on or near the Project site during the 2011, 2015, 2018, and 2019 biological surveys. However, no focused surveys for nesting birds or birds of prey have been conducted at the site to date.

Direct impacts to nesting birds could result from vegetation clearing and site grading during Proposed Project construction. A majority of the Proposed Project footprint is limited to the annual grassland and vineyard, which generally do not provide nesting habitat for birds of prey, but would support some nesting bird species. Should active nests become established in the Proposed Project footprint during the time of construction, potential direct impacts could include direct harm or mortality due to construction equipment and destruction of an active nest due to vegetation removal or grading activities.

Potential indirect impacts to birds nesting near the Project site during construction would essentially be identical to those described above for white-tailed kite. The impact of noise on avian species varies among species and depends on source, duration and schedule (e.g., Hirvonen 2001; Reijnen et al. 1996; Slabbekoorn and Peet 2003; Wood and Yezerinac 2006). However, noise levels associated with Proposed Project operation would be well within the City's noise thresholds and would be typical of noise from residential land uses directly south and west of the Project site; refer to Section 3.11, Noise and Vibration. The potential direct and indirect impacts associated with construction and operation of the Proposed Project are considered substantial effects on a special-status species and, therefore, would be a **potentially significant impact**.

Mitigation Measures

Measures to mitigate potentially significant impacts on special-status wildlife species, known to occur or could potentially occur on the Project site, are described below. Implementation of the actions and measures described in Mitigation Measures BIO-1 and BIO-2, and Mitigation Measure AES-1 (see Section 3.1, Aesthetics), which also addresses this impact by reducing spillover light that can affect some species. Compliance with these mitigation measures addresses impacts to nesting birds, birds of prey, and special-status bat species and would avoid/minimize potential impacts to these species ensuring impacts would be reduced to less than significant.

BIO-1: A qualified biologist shall conduct a habitat assessment for bats in trees adjacent to the Project site within 2 weeks prior to any Project construction (site clearing, grading). The habitat assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site and 50 feet around these areas. Potential roosting features found during the survey shall be mapped and described in a survey letter report. If roosting bats (individuals or colonies) are detected within the Project site, California Department of Fish and Wildlife shall be notified as soon as possible prior to any construction activity to confirm the bats can be avoided during construction. If a bat roosting or maternity colony cannot be completely avoided, a qualified biologist shall prepare a bat mitigation and monitoring plan for California Department of Fish and Wildlife review and approval, and that plan shall be implemented prior to commencement of construction that could impact the roosting bats or maternity colony.

BIO-2: If construction activities are scheduled to occur during the breeding season for birds (February 1 through August 31), the Project applicant or their contractor shall implement the following measures to avoid potential adverse effects to nesting raptors and other nesting birds:

- Preconstruction surveys by a biologist of all potential nesting habitats within 500-feet of construction activities, where accessible, shall be conducted by a qualified biologist. Surveys shall occur no more than 14 days prior to the initiation of site disturbance. If construction is stopped for 14 days or more during the breeding season, a new preconstruction nesting bird survey must be conducted before work can be restarted to ensure no new nesting has occurred in the interim.
- If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required, following submittal of a survey report letter to the City of St. Helena Planning Department.

- If active nests are found during preconstruction surveys, a no-disturbance buffer shall be created around active nests during the breeding season or until it is determined by the biologist that all the young have fledged. The buffers shall be established by the biologist in conjunction with the California Department of Fish and Wildlife. Typical buffers may include 500 feet for raptors and 50 to 250 feet for other bird species based on the location of the nest, the nesting species present, and types of construction activities that may cause potential nest abandonment. The perimeter of the buffer zone shall be fenced or marked with staked flagging.

3.4-2: Would the Proposed Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means? This impact would be potentially significant.

The Project site supports 0.07 acres of wetlands and 870 linear feet of other waters, in the form of four seasonal wetlands and two agricultural ditches, as shown on Figure 3.4-2. These features are anticipated to meet the criteria for jurisdictional waters of the United States based on the jurisdictional delineation conducted on the Project site in February and April 2019, on an analysis of the three parameters for wetlands (soils, hydrology, and vegetation), and connectivity/proximity to known waters of the United States in the site vicinity (i.e., Napa River).

Four seasonal wetlands are present within the Proposed Project footprint. Construction activities would result in the fill of the four wetlands. As part of the current Proposed Project design, construction of a retaining wall on or near the property line may potentially impact the agricultural ditches by filling or otherwise altering the structure or flow of these features. This is considered a **potentially significant impact.**

Mitigation Measures

Implementation of Mitigation Measure BIO-3 would ensure no net loss of wetlands or other protected waters of the U.S. or state[2] and would reduce impacts to less than significant.

BIO-3: Wetland permits (e.g., 404 Nationwide Permit, 401 Water Quality Certification, and 1602 Streambed Alteration Agreement, respectively) shall be obtained prior to any grading work. Prior to issuance of a grading permit, the Project applicant shall demonstrate authorization from the Army Corp of Engineers and any other regulatory agency to alter the wetland.

[2] Note: Permit processing can take six to nine months for minor impacts less than one half-acre in size; and up to 2 years for impacts greater than one half-acre and with special-status species impacts (Individual Permit).

3.4-3: Would the Proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? This impact would be potentially significant.

As discussed in Section 3.4.2 Environmental Setting, the Project site does not provide an essential habitat linkage or migratory corridor functions for resident or migratory wildlife. As shown on Figure 3.4-3, the Project site itself does not function as a wildlife movement corridor due to the surrounding development, lack of connectivity with other undeveloped areas, and existing and historic uses of the site. Moreover, the Project site does not provide suitable aquatic habitat for native resident or migratory fish species (see Section 3.4.2 for details). Indirect impacts, such as construction run-off to the onsite agricultural ditches, has the potential to impact fish in the Napa River. Existing permitting requirements and conditions of approval (i.e., MS4 Permit and the City's Stormwater and Runoff Pollution Control Ordinance) are sufficient to avoid water quality degradation, meet water quality standards and Basin Plan objectives; therefore, potential indirect impacts to any native resident or migratory fish via construction runoff in the Napa River are **less than significant.** See Section 3.9, Hydrology and Water Quality, for further details.

Although the annual grassland onsite does not provide adequate cover or nursery sites for many mammal species, trees along the edge of the site provide suitable habitat for nesting birds and roosting bats. In addition, some birds may use the grassland for nesting when sufficient (i.e., tall) vegetation is present. In addition, the riparian corridor along the Napa River is located approximately 500 feet north of the Project site. Lighting and increased usage of the site by humans may result in indirect effects to local wildlife using the riparian corridor for nursery sites or as a migratory corridor. Any site disturbance to these resources could result in a **potentially significant impact**.

Mitigation Measures

Implementation of Mitigation Measure AES-1 (see Section 3.1, Aesthetics) would ensure that lighting associated with the Proposed Project would adhere to guidelines and standards that reduce glare and spillover light and impacts would be less than significant. Such standards include, but are not limited to, shielded and downward focused lighting, limited up-cast decorative lighting, and no use of mirrored glass in the Proposed Project design. Compliance with Mitigation Measure BIO-5 that reimposes Mitigation Measures BIO-1, BIO-2, and BIO-3 would ensure direct and indirect impacts to the movement of any wildlife species or migratory wildlife corridors, or to wildlife nursery sites (e.g., bird nests, bat maternity roosts) would be reduced to less than significant.

Compliance with Mitigation Measures AES-1, BIO-1, and BIO-2 mitigate this impact. No additional mitigation is necessary.

3.4.5 Cumulative Impacts

The geographic context for the analysis of cumulative biological impacts includes the areas contained within the Napa Valley and adjacent foothills (identified as the region), but primarily focused on the area within the city limits. Present and probable future projects within the region (which include, but not limited to, development in the city of St. Helena, Napa County, cities of Calistoga and Napa) are anticipated to permanently remove plant and wildlife resources, which could affect both common and special-status species and their habitat.

3.4-4: Would the Proposed Project contribute to cumulative impacts with respect to biological resources? The Project's contribution would not be considerable.

The City recently updated its General Plan and adopted the 2019 General Plan and certified the Environmental Impact Report in May 2019. The 2019 General Plan Draft Environmental Impact Report (City of St. Helena 2018) notes that development in the City and elsewhere in the cumulative analysis area could cause significant cumulative impacts to nesting raptors and other special-status species; however, these cumulative impacts would be mitigated by compliance with General Plan policies. The Project site is located within an area that has been developed for residential and agricultural purposes and development of this site would not result in the reduction of available habitat, migration corridors, or other essential elements required by special-status species in the region. No special-status species have been documented at the Project site. While the Proposed Project would convert approximately 9 acres of potential foraging habitat for raptor species, the area has been disturbed in the past and provides only marginal habitat for burrowing mammal species that are the preferred prey for many resident raptor species. The existing disturbance at the site also greatly limits availability of insect prey for special-status bat species. Additionally, agriculture and natural lands in the vicinity of the city provide greater function and value as foraging habitat for these species. Due to the lack of biological value provided by the Project site, the Proposed Project's contribution to any effects on biological resources would be considered negligible. Implementation of Mitigation Measures BIO-1 through BIO-7, would further reduce the Proposed Project's cumulative contribution to regional biological resources impacts. However, absent mitigation the Proposed Project's contribution would not represent a considerable contribution to potentially significant impacts on biological resources. The Proposed Project's contribution to any existing cumulative impacts is not considerable resulting in a **less-than-significant cumulative contribution**.

Mitgation Measures

None required.

3.4.6 References

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3.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

3.5.1 Introduction

This section describes the cultural and tribal cultural resources present in the proposed Hunter Subdivision Project (Proposed Project) area and discusses applicable federal, state, and regional regulations pertaining to protection of cultural resources. This section evaluates the potential effects on cultural resources associated with development of the Proposed Project.

No comments were received that raised concerns regarding cultural or tribal cultural resources in response to the Notice of Preparation. The City of St. Helena (City) sent letters to all tribes requesting notification pursuant to Assembly Bill (AB) 52 and received responses from the Federated Indians of Graton Rancheria and the Yocha Dehe Wintun Nation. A copy of the Notice of Preparation and comments received is included in Appendix A. The Yocha Dehe Wintun Nation notes that the Project site is within their aboriginal territories and requests the cultural resources study prepared for the Proposed Project be provided for their review. The City provided the cultural report to the Yocha Dehe Nation in May 2020. Neither the Federated Indians of Graton Rancheria nor the Yocha Dehe Wintun Nation tribe requested formal consultation with the City.

The primary source referenced to prepare this section is based on the Cultural Resources Inventory and Extended Phase I and Phase II Report prepared by Dudek in March 2020. The reports are included in a confidential appendix (Appendix E) that is not available for public review given the sensitivity of the information.

3.5.2 Environmental Setting

Existing Site

The Project site is located on undeveloped land within the Napa Valley, immediately south of the Napa River, and within the City of St. Helena. The Pacific Ocean is located approximately 30 miles west, San Pablo Bay is 25 miles to the south, and Lake Berryessa is 12 miles northeast. A canal constructed for the St. Helena Flood Protection Project in 2010 bounds the site to the west and north and a residential community is present to the south. Local vegetation consists primarily of low-laying plants and grasses, with some scattered oak woodland and riparian community trees and shrubs along the drainages at the margins of the Project site. The western portion of the Project site includes an existing vineyard. The gradual slope throughout most of this area (less than 5 degrees) and proximity of Napa River and smaller drainages, would have historically resulted in the regular seasonal inundation of much of this area. The high level of surrounding topographic variability lends to the biodiversity of the area, this has traditionally provided for a broad range of flora and fauna that historically could have been used by local Wappo populations.

Geologic maps of the Project area indicate it is underlain primarily by Quaternary Alluvium consisting of Holocene-era alluvial soils deposited through stream action and erosion of the surrounding hillslopes and Franciscan Complex metamorphic deposits (Jennings et al. 1977, updated 2010). Napa Glass Mountain, the primary source of obsidian in Napa Valley, is upriver from the Project site. Soils within the Project site are mapped as Bale Clay Loam with 0 to 5% slopes. These soils are formed through alluvial action on a Holocene alluvial fan, with soils comprised of sit and clay with moderate gravel and sand components (see also Section 3.6, Geology and Soils).

Cultural Context – Ethnography

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007).

The Project area was traditionally occupied by the Wappo, whose language origins are associated with the Yukian language group. The name “Wappo” is said to be taken from the Spanish word “guapo” meaning handsome or brave, which was given to the group during Mission times by the Franciscans (Kroeber 1925). The Wappo language is the only Southern Yukian language and differs greatly from Northern Yukian with less than 20% of the basic vocabulary shared (Golla 2011). Isolated from other Yukian-speaking peoples, this group was bound on all sides by other native groups: the Lake Miwok to the north, the Patwin (Wintun) to the south and east, the Pomo to the north and west, and the Coast Miwok to the southwest (Heizer and Whipple 1971). The split between Northern Yukian and Wappo is somewhat unclear, likely ranging between 1,000 and 3,000 years ago (Kroeber 1925; Golla 2007). This split was likely related to the intrusion of Pomo-speaking communities during this period, which is evidenced through structural linguistic changes found within Wappo. These Wappo-speaking communities are indicated to have moved into the Napa region relatively, 500-1,500 years ago, based on the relatively limited presence of Miwok within the Wappo lexicon.

The territory occupied by the Wappo included Alexander Valley, most of Napa Valley, and the northern portion of Sonoma Valley. There are numerous regional subgroups including the Mishewal people of the Alexander and Knights Valley whose territory also included a small segment of the Russian River; the Mayacama people of the upper Napa Valley whose major village of *mayakma* was located near present-day Calistoga; and the Caymus people whose territory was centered around a village located at Yountville. The *Guilicos* Wappo community were situated over the mountains to the west at the head of Sonoma Creek. Yet another Wappo group was located on the south shore of Clear Lake known as Lile’ek (Golla 2011).

Wappo settlements were organized in permanent villages throughout the valleys, typically found along major watercourses, such as rivers and creeks (Sawyer 1978). Districts of smaller settlements or tribelets were generally arranged around a larger community site (Kroeber 1925). The chiefs of these smaller tribelets resided in the larger villages but were responsible for maintaining close relationships with their tribelet as well as neighboring tribes. Subsistence for the Wappo was largely dependent upon the acorn (a staple food item), as well as other native plants, and hunting of a variety of animals, including deer, bear, elk, and rabbits.

Material cultural for the Wappo included tools made of stone, sticks, and shells. Basket making, likely influenced by the Pomo, was also an important aspect of the group's material culture and was of particularly high quality and aesthetic. The last description of a traditional village (Driver 1936) describes oval-shaped houses made of grass thatch placed over bent poles (Sawyer 1978). A lack of geographical restrictions in combination with their central location between the Pomo to the west and the Patwin to the east gave the Wappo the opportunity to act as middlemen in trading of items, such as shells for use as beads or ornaments (Heizer and Elsasser 1980). The Wappo would both bury and cremate the remains of the dead. Death rituals were complex and could involve burning personal possessions and relatives cutting their hair, rubbing clay on their heads, scoring of their flesh, and participating in intense ritual dances (Sawyer 1978).

Historic Period

Spanish Period (1769–1822)

The first Spanish expedition to enter the San Francisco Bay Area occurred under Gaspar de Portola in 1769. Portola's chronicler, Fray Juan Crespi, detailed the journey of the group as it ventured up the coast. The first Spanish overland expedition into the San Francisco Bay region was led by Juan Bautista de Anza. The expedition reached San Francisco in 1776, where its members founded Mission Dolores and the Presidio. Spanish missionization of Alta California was initiated in San Diego (1769). A total of 21 missions were constructed by the Dominican and Franciscan orders between 1769 and 1823. Missions in the region included San Francisco de Asís (1776), Santa Clara de Asís (1776), San José de Guadalupe (1797 in Alameda County), San Rafael Arcángel (1817 in Marin County), and San Francisco Solano (1823 in Sonoma County; Grunsky 1989).

Mexican Period (1822–1848)

Spanish-Mexican settlers arrived in the Napa Valley in 1823. In 1836, the first land grant within the Napa Valley area was awarded to George Yount at Caymus (Bartoy et al. 2005). Local Native Americans assisted Yount in constructing his two-story Kentucky-style log house. Within the next ten years, the Napa Valley was divided and parceled into numerous ranchos. In 1836,

Nicolás Higuera, a soldier who served at the San Francisco Presidio, received several land grants from the Mexican government within Napa Valley, including an area called the Rancho Entre Napa, which included property that is now part of the present-day City of Napa.

Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to Native American populations. Following the establishment of the Mexican republic, the government seized many of the lands belonging to Native Americans, providing them as parts of larger Land Grants to affluent Mexican citizens and rancheros. The 1833 Secularization Act passed by the Mexican Congress ordered half of all mission lands to be transferred to Native Americans, and the other half to remain in trust and managed by an appointed administrator. These orders were never implemented due to several factors that conspired to prevent Native Americans from regaining their patrimony.

Under the command of General Vallejo, Mexican soldiers had a series of conflicts with Wappo Native American tribes and allied Pomo tribes. Known as the Satiyomi Campaigns, the Wappo fought successfully against Vallejo and his Patwin allies in 1834, 1836, and 1842 (Bartoy et al. 2005). Largely as a result of these conflicts, Vallejo signed two treaties with the Wappo in 1836.

American Period (Post 1848)

California was officially ceded to the United States in 1848, which led to the continued appropriation of Native American Lands by ranchers, prospectors, and an increasing number of settlers. The United States Government did little to dissuade these trespasses. From 1850, with the passage of California's Indian Act, until legislative reforms in the late 1880s, state laws promoted conditions that amounted to indentured servitude for much of the Native American population throughout California. On February 8, 1850, Napa became one of California's original 27 counties, with the City of Napa as the seat of the county. In 1852, the first mineral springs resort in California was established at White Sulphur Springs, approximately 4 miles to the west of St. Helena (Bartoy et al. 2005). These bolstered the local economy, supporting the presence of multiple hotels and other businesses. A tremendous influx of individuals occurred in this area as a result of the California Gold Rush, which initiated in 1848. Since 1850, the economic growth of Napa County has been largely based on agriculture, ranching, timber, and mineral resources.

By 1868, the railroad had been extended to St. Helena, and with easier transportation came more residents and a thriving community. St. Helena, officially founded in 1876, was originally part of Dr. Edward Turner Bale's Rancho Carne Humana (Napa County Historical Society 2019). Bale died in 1849, leaving his wife, Maria Ygnacia Soberanes, a member of the prominent Vallejo family. Maria built Bale's grist and lumber mill into a profitable enterprise, and later sold 126 acres in the City to Henry Still and Charles Walters. She also provided land to numerous individuals as an incentive to open local businesses.

A portion of downtown St. Helena was designated a National Register Historic District in 1998. Based on records maintained by the Napa County Historical Society, it contains 35 historic buildings mostly along Main Street but also extending onto Railroad Avenue and Money Way (2019).

Records Search

The Cultural Resources Inventory and Extended Phase I and Phase II Report (confidential Appendix E) prepared for the Proposed Project included a California Historical Resources Information System (CHRIS) records search, which was conducted at the Northwest Information Center (NWIC) on October 22, 2018, for the Project site and surrounding 0.5-mile radius. This search included their collection of mapped prehistoric, historical and built-environment resources, Department of Parks and Recreation (DPR) Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources included the National Register of Historic Places (NRHP), California Inventory of Historical Resources/California Register of Historical Resources (CRHR) and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and Caltrans Bridge Survey information.

The records search conducted at the NWIC concluded that 59 previous cultural resources technical investigations have been conducted within a one half-mile of the Project site. Of these, seven have included a portion of the Project site (Appendix E, Table 1). Approximately 90% of the Project site has been included in previous investigations. Cultural resource technical investigations S-043810 through S-043810d, which include the Project site, are summarized below.

Archaeological investigations conducted by Pacific Legacy in support of the St. Helena Flood Protection Project (Flood Protection Project) occurred between 2004 and 2013. The Flood Protection Project overlapped the western and northern portions of the present Project site. As a result of the survey and Extended Phase I exploratory work, eight archaeological resources were identified (all in the general vicinity of the present Project site): CA-NAP-399, CA-NAP-406, CA-NAP-413, CA-NAP-843, CA-NAP-863, CA-NAP-1007 (formerly HMS Vineyards Site), CA-NAP-1008 (formerly Miller Vineyard Site), and CA-NAP-1009/H (formerly HMS Historic Stone Wall). Based on the results of the Phase I Inventory and Phase II Evaluation efforts conducted for the Flood Protection Project, the U.S. Army Corps of Engineers (USACE) and State Water Resources Control Board (SWRCB) determined that five of the identified archaeological sites (CA-NAP-413, CA-NAP-843, CA-NAP-1007, CA-NAP-1008, and Cal-NAP-1009H) lacked sufficient data potential and integrity to meet the criteria for NRHP eligibility. It was determined that three sites (CA-NAP-399, CA-NAP-406, and CA-NAP-863) were eligible for listing in the NRHP listing under Criterion D. Avoidance of the sites was considered, and it was determined that the objectives of the proposed Flood Protection Project were important and could not be met without destroying or damaging the identified Historic Properties. The State Historic Preservation

Office (SHPO) concurred with these findings in 2006. A Historic Properties Treatment Plan was prepared outlining a program for Phase III Data Recovery and analysis that addressed the research potential of cultural deposits situated within the Flood Protection Project area of potential effects (APE). As part of this process, a Memorandum of Agreement was prepared between SHPO, USACE, and SWRCB in 2007. With the expectation that human remains would be encountered during investigations and later monitoring activities, the Mishewal Wappo Tribe of Alexander Valley and the City developed a burial agreement for the treatment of human remains in 2007 (Bartoy and Holson 2007: 87). Phase III Data Recovery was completed of the entirety of CA-NAP-399 and CA-NAP-863, as well as an approximate 500 x 100-foot section of CA-NAP-406. Site CA-NAP-406 was indicated in report maps to continue eastward into what represents the present Project site (Bartoy et al. 2005: 90). The eastern limits of this site were not determined as part of this work, nor was subsurface evaluation or data recovery completed of this area within the present Project site.

The NWIC records search indicated that 30 individual cultural resources have been recorded within the records search area. Three of the above-mentioned resources intersect the Project site: CA-NAP-406, CA-NAP-843, and CA-NAP-1008 (Appendix E). Of these three resources, CA-NAP-406 is the only resource that meets the criteria for NRHP eligibility. As described above, work for the Flood Protection Project resulted in a substantial level of previous archaeological investigation work along the western and northern portions of the Project site. This work has demonstrated the area to contain significant and highly sensitive archaeological resources. A total of 163 human burials were recovered from one site (CA-NAP-399) as part of the Flood Protection Project, the largest number of burials recovered from a single site in Napa Valley to date (Schneider et al. 2013: 44). Human remains were not documented within archaeological resources intersecting the Project site. Documented cultural resources that intersect or are located within the Project site (CA-NAP-406, CA-NAP-843 and CA-NAP-1008) are described further, below.

P-28-000307 (CA-NAP-406)

P-28-000307 was recorded initially during survey and subsurface testing completed by Yolande Beard in 1976 as a small site with worked obsidian, a pestle fragment and a small piece of magnesite. The resource was relocated by Stuart Guedon on June 13, 1995, at this recorded location. Guedon observed light scatter of obsidian debitage. The site was recorded as part of investigations and data recovery efforts for the Flood Protection Project between 2004 and 2009 (Bartoy et al. 2005; Schneider et al. 2013). The eastern and western extent of this site remain unconfirmed, however the resource as currently recorded measures 130 x 95 meters (m). An undetermined portion of this site intersects the Project site.

Durring Pacific Legacy's 2005 evaluation, archaeological investigation of CA-NAP-406 consisted of the placement of 17 auger bores, 22 shovel test probes (50 centimeters [cm] x 50 cm), two excavation units (1 m x 1 m), and one mechanically excavated trench (3 m x 0.5 m; Bartoy et al. 2005). Four of the auger bores were placed within excavation units and shovel test probes to ensure that the maximum depth of the cultural deposit had been reached. Testing was limited to the APE, which was defined as approximately 100 feet to the east of the then proposed Adams Street extension. The total amount of soil excavated in the 22 shovel test probes and two excavation units amounted to 4.24 cubic meters. A total of 4,244 artifacts were recovered from this site during this investigation.

Phase III data recovery at CA-NAP-406 was completed between 2007 and 2009, and involved excavation of two Control Units measuring 1 x 1 m; four Rapid Recovery Units measuring 2 x 1 m; and four trenches, measuring 3 x 1 m. In total, including Phase II investigations, the recovered assemblage included 5,711 pieces of lithic debitage, 17 bifaces, one core, seven edge-modified flakes, one hammerstone, 101 charcoal fragments, seven pieces of baked clay, and 40 historical-era artifacts.

This resource was determined eligible for inclusion in the NRHP/CRHR by the USACE and SWRCB in 2005. SHPO provided concurrence with these determinations in 2006. As such, an undetermined portion of this site, continuing from the west into the Project site, is assumed eligible for NRHP/CRHR listing.

P-28-000701 (CA-NAP-843)

CA-NAP-843 was recorded initially during the survey and subsurface testing completed by J. Abell of Archaeo-Tec on April 1, 1993, for the proposed Safeway Relocation project. The site was recorded as a sparse obsidian lithic scatter with 3 projectile point fragments, one biface and several modified flakes, and debitage distributed across an area measuring 85 x 35 m. The recorded location of this site was located immediately southwest of the Project site; however, Abell noted that the resource may continue into the parcel representing the Project site. All items were identified on the surface; auguring yielded no subsurface material or identified midden-like soils. The resource was relocated by Stuart Guedon on June 13, 1995 at this recorded location. Guedon observed an extremely light and diffuse scatter of obsidian debitage that did not extend into adjoining areas.

The site was re-identified during subsurface testing by Pacific Legacy for the Flood Protection Project in 2004. While NWIC resource files map this site to the southwest, Pacific Legacy's technical report indicates that this testing occurred within the boundaries of the Project site (Bartoy et al. 2005: 126). Archaeological investigation consisted of the placement of 29 auger bores and 15 shovel test probes (50 cm x 50 cm). The total amount of soil excavated in the

shovel test probes amounted to 1.5 cubic meters. A total of four artifacts were recovered from this site during this investigation. Testing confirmed the characterization of this site as a low-density lithic scatter with no associated midden (Bartoy et al. 2005). The site was considered a sparse surface scatter with no depth to the deposit. The artifact assemblage from the site included three edge-damaged obsidian flakes and one fragment of historic glass.

Given the low density of cultural materials and the lack of spatial patterning, this resource was determined not eligible for inclusion in the NRHP or the CRHR by the USACE and SWRCB. SHPO provided concurrence with these determinations in 2006.

P-28-001267 (CA-NAP-1008)

CA-NAP-1008 (also referred to as “Miller Vineyard Site”) was identified by Pacific Legacy for the Flood Protection Project initiating in 2004 at a location that falls within the northeastern portion of the Project site. The site was recorded as a surface scatter and shallow deposit of flaked lithic artifacts, predominantly Napa Valley obsidian, measuring 150 x 100 m. Extended Phase I Inventory and Phase II Evaluation work completed by Pacific Legacy occurred in 2004 and 2005 (Bartoy et al. 2005). Subsurface archaeological investigation included 32 augers, 13 shovel test pits (measuring 50 x 50 cm), two excavation units (measuring 1 x 1 m), and two mechanically excavated trenches (measuring 3 m x 0.5 m). A total of 396 artifacts were recovered from within 3.88 cubic meters of removed soil. Soil mixing to a depth of 60 centimeters below the surface (cmbs) was observed, presumably as a result of past discing activities associated with the surrounding vineyard. Obsidian hydration placed the sited chronologically between 2,500 years BP and 500 years BP.

The site was determined not eligible for CRHR/NRHP listing by the USACE and SWRCB based on the results of extended Phase I Inventory and Phase II Evaluation work for the Flood Protection Project (Bartoy et al. 2005). SHPO provided concurrence with these determinations in 2006.

Pedestrian Survey and Extended Phase I Testing

A Phase I Survey of the entire Project site was completed November 15, 2018 (Appendix E). The southern half of the Project site is occupied by a small vineyard, allowing for approximately one-half of the ground surface to be directly visible. Low-lying grasses were present throughout the northern half of the Project site, restricting visibility of the ground surface to less than 10% in most areas on this initial site visit. Evidence for buried cultural deposits was opportunistically sought through inspection of natural or artificial erosion/excavation exposures and the spoils from rodent burrows. The Project site has been subject to a number of past disturbances. The most notable of these have included present and past agricultural activities, as well as likely earth moving work in the northernmost portion of the Project site. During construction of the

Flood Protection Project placement of excess fill material was placed on the Project site. No artifacts were observed on the surface during the survey; however, visibility was highly restricted in most areas by low-lying vegetation and organic debris.

Subsurface probing (XPI probing or investigation) was conducted by a Dudek archeologist from November 15, 2018 to November 17, 2018. The intent of this work was to assess if subsurface conditions are present for significant archaeological deposits to be present. Excavation included three 6-inch hollow-stem augers and 5 shovel test probes. Excavations did result in the identification of soils within the Project site that had potential to contain archaeological deposits. The XPI investigations resulted in the identification of areas within the Project site that contain, and have the potential to contain, archaeological resources.

While the intent of the XPI investigation was to assess the potential for subsurface soils to be present, artifacts were identified in the locations nearest previously recorded archaeological resources. Archaeological testing was not intended to evaluate the frequencies or distribution of archaeological materials and deposits within the Project site. However, general results indicate artifact frequencies were highest in the central (near CA-NAP-406) and northern (CA-NAP-1008) portions of the Project site. One artifact was also identified in the southern portion of the Project site (near CA-NAP-843). The majority of cultural material was recovered from the lower, darker stratum (20-60 cmbs). Artifacts consisted predominantly of small obsidian tertiary flakes. These findings are generally consistent with results documented for Phase II excavations completed for the Flood Control Project along the western side of the central portion of the Project site (Bartoy et al. 2005). This study suggested that previous agricultural activities may have extended as deep as 60 cmbs in some areas, below which artifact frequencies decreased until encountering a gray clay sterile soil sub-stratum at approximately 1.5 meters below the surface (Schneider et al. 2013: 27). It is quite likely that this pattern extends into the Project site.

Phase II Testing and Ground Penetrating Radar

Based on the finding of the Phase I testing and the potential for unknown subsurface resources to be present within the site, further excavations were necessary to fully understand the extent of disturbances resulting from the previous Flood Protection Project and the changes in the soils. Dudek archeologists conducted the Phase II testing starting on January 20, 2020 through January 24, 2020. The intent of the Phase II survey was to build upon the Phase I survey and XPI investigation work. Results of these excavations are provided in Table 3.5-1.

Table 3.5-1
Extended Phase I and Phase II Testing Results

Unit ID	Depth (cmbs)	Results	Artifacts Recovered	Soil Description
AT-01	0-20	Negative	None	2.5Y 5/3 Light olive brown clay silt with gravel, compact
	20-40	Positive	1 obsidian shatter	2.5Y 5/3 Light olive brown clay silt with gravel, compact: 1 obsidian shatter fragment
	40-60	Negative	None	2.5Y 6/2 Light brown gray clay silt with gravel, compact. Rock impasses at 60 cmbs
AT-02	0-20	Negative	None	10YR 3/2 Very dark grayish brown loamy clay with gravel, compact
	20-40	Negative	None	10YR 3/2 Very dark grayish brown loamy clay with gravel, compact
	40-60	Negative	None	10YR 3/2 Very dark grayish brown loamy clay with gravel, compact
AT-03	0-20	Negative	None	10YR 3/2 Very dark grayish brown loamy clay with gravel, compact
	20-40	Negative	None	10YR 3/2 Very dark grayish brown loamy clay with gravel, compact
	40-60	Negative	None	10YR 3/2 Very dark grayish brown loamy clay with gravel, compact
AT-04	0-20	Positive	1 green bottle glass fragment	10YR 4/1 Dark gray silty clay, no gravels: 1 fragment green bottle glass
	20-40	Negative	None	10YR 4/1 Dark gray clay, < 2% angular gravels
	40-60	Negative	None	10 YR 4/1 Dark gray clay < 5% angular gravels
	60-80	Negative	4 obsidian debitage	10 YR 4/1 Dark gray clay < 5% angular gravels. Rock impasse at 75 cmbs
AT-05	0-20	Negative	None	2.5 YR 3/2 Very dark grayish brown clay loam
	20-40	Positive	2 obsidian debitage	10YR 3/2 Very dark grayish brown silty loam with increased sand content
	40-60	Positive	2 obsidian debitage	10YR 3/2 Very dark grayish brown silty loam with increased sand content
	60-80	Positive	1 obsidian debitage	10YR 2/2 Very dark brown silty loam with increased grit, moderately compact. Rock impasse at 80 cmbs
AT-06	0-20	Negative	None	10YR 3/2 Very dark grayish brown silty loam
	20-40	Negative	None	10YR 3/2 Very dark grayish brown silty loam
	40-60	Negative	None	10YR 3/2 Very dark grayish brown silty loam
	60-80	Negative	None	10YR 3/2 Very dark grayish brown silty loam
	80-100	Negative	None	10YR 3/2 Very dark grayish brown silty loam
	100-120	Negative	None	10YR 3/2 Very dark grayish brown silty loam
	120-140	Negative	None	2.5Y 4/3 Olive brown sandy silt, with 20% gravel.
	140-160	Negative	None	2.5Y 4/3 Olive brown sandy silt, with 20% gravel.
	160-180	Negative	None	2.5Y 4/3 Olive brown sandy silt, with 20% gravel.
	180-200	Negative	None	2.5Y 4/3 Olive brown sandy silt, with 20% gravel. Auger terminated at 187 cmbs

Table 3.5-1
Extended Phase I and Phase II Testing Results

Unit ID	Depth (cmbs)	Results	Artifacts Recovered	Soil Description
AT-07	0-20	Negative	None	10YR 3/2 Very dark grayish brown silty loam, gradual increase in sand content with depth
	20-40	Negative	None	10YR 3/2 Very dark grayish brown silty loam, gradual increase in sand content with depth
	40-60	Negative	None	10YR 4/2 Dark grayish brown sandy loam
	60-80	Negative	None	10YR 4/2 Dark grayish brown sandy loam
	80-100	Negative	None	10YR 5/3 Brown sandy clay, coarse sand with 15% angular gravels. Rock impasse at 90 cmbs
AT-08	0-20	Negative	None	10YR 3/2 Very dark grayish brown clay loam
	20-40	Negative	None	2.5Y 3/2 Very dark gray brown clay loam, increased sand, <5% small cobbles and gravel
	40-60	Negative	None	2.5Y 3/2 Very dark gray brown clay loam, increased sand, <5% small cobbles and gravel
	60-80	Negative	None	2.5Y 4/3 Olive brown sandy silt, some oxidation present
	80-100	Negative	None	2.5Y 4/4 Olive brown sandy silt, some oxidation present
AT-09	0-20	Negative	None	10YR 3/3 Dark brown silt loam
	20-40	Negative	None	10YR 3/3 Dark brown silty loam
	40-60	Negative	None	10 YR 3/2 Very dark gray brown silty clay loam. Rock impasse at 55 cmbs
AT-10	0-20	Negative	None	10YR 3/2 Very dark grayish brown silty loam with coarse sand
	20-40	Negative	None	10YR 3/3 Dark brown silty clay loam
	40-60	Negative	None	10YR 3/3 Dark brown silty clay loam. Rock impasse at 53 cmbs
AT-11	0-20	Negative	None	10YR 3/1 Very dark gray clay silt
	20-40	Negative	None	2.5Y 3/3 dark olive brown silty clay
	40-60	Negative	None	2.5Y 3/3 dark olive brown silty clay
	60-80	Negative	None	2.5Y 3/3 dark olive brown silty clay
	80-100	Negative	None	2.5Y 2.5/1 Black silty clay
	100-120	Negative	None	2.5Y 2.5/1 Black silty clay
	120-140	Negative	None	2.5Y 2.5/1 Black silty clay
	140-160	Negative	None	2.5Y 2.5/1 Black silty clay
AT-12	0-20	Positive	1 obsidian debitage	2.5Y 3/2 Very dark gray brown clay loam
	20-40	Positive	2 obsidian debitage	2.5Y 3/2 Very dark gray brown clay loam
	40-60	Negative	None	2.5Y 3/2 Very dark gray brown clay loam
	60-80	Negative	None	2.5Y 3/2 Very dark gray brown sandy clay loam, with 20% small-medihm gravels and cobbles. Rock impasse at 70 cmbs
AT-13	0-20	Positive	1 obsidian flake	2.5Y 3/2 Very dark gray brown silty loam
	20-40	Negative	None	2.5Y 3/2 Very dark gray brown silty loam
	40-60	Negative	None	2.5Y 4/1 dark geay silty clay loam with oxidation throughout

Table 3.5-1
Extended Phase I and Phase II Testing Results

Unit ID	Depth (cmbs)	Results	Artifacts Recovered	Soil Description
	60-80	Negative	None	2.5Y 2.5/1 black silty clay loam, compact
	80-100	Negative	None	2.5Y 2.5/1 black silty clay loam, compact
	100-120	Negative	None	2.5Y 2.5/1 black silty clay loam, compact
	120-140	Negative	None	10YR 4/1 dark gray mottled with 10YR 4/3 brown clay loam, compact
	140-160	Negative	None	2.5Y 5/2 grayish brown sandy clay loam
	160-180	Negative	None	2.5Y 5/2 grayish brown sandy clay loam
	180-200	Negative	None	2.5Y 5/2 grayish brown sandy clay loam
	200-220	Negative	None	2.5Y 4/2 Dark grayish brown sandy clay loam
	220-240	Negative	None	2.5Y 4/2 Dark grayish brown sandy clay loam
	240-260	Negative	None	2.5Y 4/2 Dark grayish brown sandy clay loam
	260-280	Negative	None	2.5Y 4/2 Dark grayish brown sandy loam, water table at 280 cmbs
STP-01	0-20	Positive	21 obsidian flakes, 1 retouched obsidian flake	10YR 3/2 very dark gray brown loamy clay with gravel, compact
	20-40	Positive	45 obsidian flakes	10YR 3/2 Very dark gray brown clay silt, compact
STP-02	0-20	Positive	9 obsidian flakes	2.5Y 5/3 Light olive brown clay silt with gravel, compact
	20-40	Positive	44 obsidian flakes	10YR 3/2 Very dark gray brown clay silt, compact
STP-03	0-20	Positive	3 obsidian flakes, 1 chert flake	2.5Y 5/3 Light olive brown clay silt with gravel, compact
	20-40	Positive	3 obsidian flakes	10YR 3/2 Very dark gray brown clay silt, compact
STP-04	0-20	Positive	14 obsidian flakes	10YR 3/3 Dark Brown sandy clay silt with gravel, compact
	20-40	Positive	8 obsidian flakes	10YR 3/2 Very dark gray brown clay silt, compact
STP-05	0-20	Positive	34 obsidian flakes	10YR 4/2 Dark grayish brown loamy clay with gravel, compact
	20-40	Positive	63 obsidian flakes, 1 obsidian chopper/scraper	10YR 3/2 Very dark gray brown clay silt, compact
STP-08	0-20	Positive	50 obsidian debitage	10YR 3/2 very dark gray brown loamy clay, lightly compacted, with <5% small rounded gravels
	20-40	Positive	44 obsidian debitage	10YR 3/2 very dark gray brown loamy clay, lightly compacted, with <5% small rounded gravels
	40-60	Positive	4 obsidian debitage	10YR 3/2 very dark gray brown loamy clay, lightly compacted, with <2% small rounded gravels
	60-80	Negative	None	10YR 4/3 Brown clay with <2% small angular and rounded gravels
	80-100	Negative	None	10YR 4/4 Dark yellowish-brown sandy clay, <5% gravel and cobbles
	100-120	Negative	None	10YR 4/4 Dark yellowish-brown sandy clay, <5% gravel and cobbles. Terminated at 105 cmbs due to water table

Table 3.5-1
Extended Phase I and Phase II Testing Results

Unit ID	Depth (cmbs)	Results	Artifacts Recovered	Soil Description
STP-09	0-20	Positive	21 obsidian debitage	2.5Y 3/1 Very dark gray silty clay with <10% angular gravel
	20-40	Positive	14 obsidan debitage, modern plastic	2.5Y 3/1 Very dark gray silty clay with <10% angular gravel
	40-60	Positive	21 obsidian debitage, brick fragment, wooden lathe fragment, and modern plastic	2.5Y 3/1 Very dark gray silty clay with <10% angular gravel
	60-80	Positive	21 obsidian debitage, 1 obsidian retouched edge tool, brick fragment	2.5Y 3/2 very dark gray brown sandy silt with <15% angular gravel, very compact
	80-100	Positive	22 obsidian debitage, brick fragment	2.5Y 3/2 very dark gray brown sandy silt with <15% angular gravel, very compact
	100-120	Positive	1 obsidian debitage	Auger - 2.5Y 3/2 very dark gray brown clay loam with <15% angular gravel, slightly compact. Rock impase at 120 cmbs
STP-10	0-20	Positive	1 obsidian biface, 17 obsidian debitage	2.5Y 3/2 Very dark gray brown silty clay loam
	20-40	Positive	3 obsidian debitage, 2 glass fragments, plastic, and aluminum	2.5Y 3/2 Very dark gray brown silty clay loam, increasing clay content and compaction with depth
	40-60	Positive	1 obsidian debitage	2.5Y 3/2 Very dark gray brown sandy silty clay loam
	60-80	Negative	None	Auger - 2.5Y 3/2 Very dark gray brown sandy silt
	80-100	Negative	None	Auger - 2.5Y 3/2 Very dark gray brown sandy silt
	100-120	Negative	None	Auger - 2.5Y 3/2 Very dark gray brown sandy silt
	120-140	Negative	None	Auger - 2.5Y 3/1 Very dark gray sandy clay
	140-160	Negative	None	Auger - 2.5Y 3/2 Very dark gray coarse sand. Terminated at 160 cmbs
STP-11	0-20	Positive	6 obsidian debitage	7.5YR 3/2 dark brown loamy clay with <5% rounded gravel
	20-40	Positive	3 obsidian debitage	7.5YR 3/2 dark brown loamy clay with <5% rounded gravel
	40-60	Positive	3+ pieces of plastic	10YR 3/2 dark grayish brown loam with <5% rounded gravel
	60-80	Negative	None	7.5YR 3/4 dark brown loam
	80-100	Negative	None	80-90 cmbs: 7.5YR 3/4 dark brown loam 90-100 cmbs: coarse gray sand
STP-12	0-20	Positive	3 obsidian debitage	10YR 3/3 Dark brown sandy silt
	20-40	Positive	6 obsidian debitage	10YR 3/3 Dark brown sandy silt
	40-60	Positive	13 obsidian debitage	40-50 cmbs: 10YR 3/3 Dark brown sandy silt 50-60: 10YR 3/2 Very dark grayish brown sandy silt with ~50% cobbles

Table 3.5-1
Extended Phase I and Phase II Testing Results

Unit ID	Depth (cmbs)	Results	Artifacts Recovered	Soil Description
	60-80	Negative	None	10YR 3/2 Very dark grayish brown sandy silt with ~50% cobbles. Terminated at 75 cmbs due to rock impasse
STP-14	0-20	Negative	None	10YR 4/3 Brown sandy loam with <5% gravel
	20-40	Negative	None	10YR 3/3 Dark brown sandy loam with <5% gravel
	40-60	Negative	None	10YR 3/3 Dark brown sandy loam with <5% gravel, cobbles at 55 cmbs
STP-16	0-20	Negative	None	10YR 3/2 Very dark grayish brown loamy clay
	20-40	Negative	None	10YR 3/2 Very dark grayish brown loamy clay
	40-60	Negative	None	10YR 3/2 Very dark grayish brown loamy clay, 55cmbs increased cobbles (5-10 cm diam.)
STP-17	0-20	Positive	1 obsidian debitage	10YR 3/2 Very dark grayish brown sandy loam with angular cobbles (5-15 cm diam.)
	20-40	Negative	None	10YR 3/2 Very dark grayish brown sandy loam with angular cobbles (5-15 cm diam.)
	40-60	Negative	None	10YR 3/2 Very dark grayish brown sandy loam with angular cobbles (5-15 cm diam.)
STP-18	0-20	Negative	None	10YR 3/2 Very dark grayish brown sandy loam with <5% angular gravels. Angular cobbles (4-8 cm diam.) at 15 cmbs
	20-40	Negative	None	10YR 4/1 Dark gray loamy clay, < 2% angular gravels, clobbles (~10 cm diam.)
	40-60	Negative	None	10YR 4/1 Dark gray loamy clay, < 2% angular gravels, clobbles (~10 cm diam.)
STP-19	0-20	Negative	None	10YR 3/2 Very dark grayish brown loamy clay
	20-40	Negative	None	10YR 3/3 Dark brown loamy clay with cobbles (4-8 cm diam.)
	40-60	Negative	None	10YR 3/3 Dark brown loamy clay with cobbles (4-8 cm diam.)
STP-21	0-20	Positive	1 obsidian debitage	10YR 3/2 Very dark grayish brown loamy clay with <5% angular gravels
	20-40	Negative	None	10YR 3/2 Very dark grayish brown loamy clay with <5% angular gravels
	40-60	Negative	None	10YR 3/2 Very dark grayish brown loamy clay with <5% angular gravels
STP-22	0-20	Negative	None	10YR 3/3 Dark brown sandy loam with <5% gravel
	20-40	Negative	None	10YR 3/3 Dark brown sandy loam with <5% gravel
	40-60	Negative	None	10YR 3/3 Dark brown sandy loam with >50% cobbles (4-10 cm diam.)
STP-23	0-20	Positive	1 obsidian debitage	2.5Y 3/2 Dark Brown clay silt
	20-40	Negative	None	2.5Y 3/2 Dark Brown clay silt
	40-60	Negative	None	2.5Y 3/2 Dark Brown clay silt
	60-80	Negative	None	Auger - 60-70 cmbs: 2.5Y 3/2 Dark brown clay silt 70-80 cmbs: 2.5Y 2.5/1 Black silty clay

Table 3.5-1
Extended Phase I and Phase II Testing Results

Unit ID	Depth (cmbs)	Results	Artifacts Recovered	Soil Description
	80-100	Negative	None	Auger - 2.5Y 2.5/1 black silty clay
	100-120	Negative	None	Auger - 2.5Y 2.5/1 black silty clay
	120-140	Negative	None	Auger - 2.5Y 2.5/1 black silty clay
	140-160	Negative	None	Auger - 2.5Y 2.5/1 black silty clay
STP-24	0-20	Negative	None	10YR 3/3 Dark brown sandy silt
	20-40	Negative	None	10YR 3/3 Dark brown sandy silt
	40-60	Negative	None	10YR 3/3 Dark brown sandy silt
STP-25	0-20	Positive	1 obsidian debitage	7.5YR 3/2 Dark brown sandy loam with 5% large cobbles (5-15 cm diam.)
	20-40	Positive	1 historic ceramic	7.5YR 3/2 Dark brown sandy loam with 70% large cobbles (5-15 cm diam.)
STP-26	0-20	Negative	None	7.5YR 3/2 Dark brown silty sandy loam
	20-40	Negative	None	7.5YR 3/2 Dark brown silty sandy loam
	40-60	Negative	None	7.5YR 3/2 Dark brown silty sandy loam with 50% cobbles (5-15 cm diam.)
STP-27	0-20	Negative	None	10YR 4/2 Dark grayish brown loamy clay with ~50% gravel
	20-40	Negative	None	10YR 3/2 Very dark gray sandy clay with ~50% gravel
	40-60	Positive	12 obsidian debitage	10YR 3/2 Very dark grayish brown clay with 10% gravels: 12 obsidian debitage
	60-80	Negative	None	10YR 3/2 Very dark grayish brown sandy loam with 10% gravels
	80-100	Negative	None	10YR 2/2 Very dark brown sandy loam
	100-120	Negative	None	10YR 2/2 Very dark brown sandy loam
	120-140	Negative	None	10YR 2/2 Very dark brown sandy loam. Terminated at 130 cmbs
STP-28	0-20	Positive	6 obsidian debitage	10YR 4/2 Dark grayish brown silty clay
	20-40	Negative	None	10YR 3/2 Very dark grayish brown clay
	40-60	Negative	None	2.5YR 3/1 Very dark grayish brown
	60-80	Negative	None	Auger - 2.5YR 4/1 Very dark gray sandy clay
	80-100	Negative	None	Auger - 2.5YR 4/1 Very dark gray sandy clay
	100-120	Negative	None	Auger - 2.5YR 4/1 Very dark gray sandy clay
	120-140	Negative	None	Auger - 2.5YR 4/1 Very dark gray sandy clay
	140-160	Negative	None	Auger - 2.5YR 4/1 Very dark gray sandy clay
STP-29	0-20	Positive	6 obsidian debitage	10YR 2/2 Very dark brown clay
	20-40	Positive	3 obsidian debitage	10YR 2/2 Very dark brown clay
	40-60	Positive	4 obsidian debitage	10YR 3/2 Very dark grayish brown silty clay
	60-80	Positive	1 obsidian debitage, 3 glass fragments	10YR 3/2 Very dark grayish brown silty clay
	80-100	Negative	None	10YR 3/2 Very dark grayish brown silty clay
	100-120	Negative	None	10YR 3/2 Very dark grayish brown silty clay

Table 3.5-1
Extended Phase I and Phase II Testing Results

Unit ID	Depth (cmbs)	Results	Artifacts Recovered	Soil Description
	120-140	Negative	None	10YR 3/2 Very dark grayish brown silty clay
	140-160	Negative	None	5Y 3/1 Very dark gray silty clay. Terminated at 150 cmbs.
STP-30	0-20	Positive	2 obsidian debitage	2.5Y 3/2 Dark brown sandy loam
	20-40	Positive	1 obsidian debitage	2.5Y 3/2 Dark brown sandy loam
	40-60	Negative	None	2.5Y 3/1 Very dark grayish brown sandy loam
	60-80	Negative	None	2.5Y 4/2 Dark grayish brown sandy silt with 40% large cobbles
	80-100	Negative	None	2.5Y 4/2 Dark grayish brown sandy silt
	100-120	Negative	None	2.5Y 4/2 Dark grayish brown sandy silt

Source: Appendix E.
Notes: cmbs = centimeters below the surface; STP = shovel test pit

Ground-penetrating radar (GPR) was used in transects and blocks to locate any subsurface anomalies. The GPR was set up to record data to a maximum depth of 8 meters (approximately 26 feet). The GPR was useful in assessing the level of previous subsurface disturbance and presence and depth of fill within the Project site, and the potential for soils to support the presence of cultural material and deposits associated with the three previously recorded sites in the vicinity: CA-NAP-406, CA-NAP-843, and CA-NAP-1008.

Phase II testing for the Proposed Project included an additional 10 augers and 25 shovel test probes. Archaeological testing did not result in the identification of intact cultural deposits. Results indicate artifact frequencies were highest in the central (near CA-NAP-406) and northern (CA-NAP-1008) portions of the Proposed Project APE. Most cultural material was recovered from shallower contexts, above 60 cmbs. Modern debris was encountered to 100 cmbs, confirming clear disturbances to this depth. Artifacts consisted predominantly of small obsidian tertiary flakes. These findings are generally consistent with the assemblage documented by aerial imagery and Phase II excavations completed for the Flood Control Project along the western side of the central portion of the Proposed Project APE (Bartoy et al. 2005). This study suggested that a gray sandy clay sterile soil sub-stratum was present approximately 1.5 m below the surface (Schneider et al. 2013).

The portion of the Project site occupied by the vineyard, while previously disturbed through agricultural activities, was not capped by redistributed soils during the Flood Protection Project. As such, these areas would have the highest potential for intact cultural deposits to persist. The total assemblage of artifacts recovered from all XPI investigations and Phase II excavation units within this area included four fragments of obsidian debitage and one possibly historical-era

ceramic fragment. It is most likely that soils within the vineyard area are likely representative of the native soils underlying fill to the north of the Project site.

Tribal Cultural Resources and Tribal Consultation

A tribal cultural resource (TCR) is a site, feature, place, cultural landscape, sacred place, or object with cultural value to a tribe that is included or determined to be eligible for inclusion in the California Register of Historic Resources, included in a local register of historical resources, or otherwise determined to be significant by the lead agency of an environmental review process.

On September 28, 2018, a sacred lands file search request and a request for the Native American contact list for the area was sent to the Native American Heritage Commission (NAHC). On October 10, 2018, the NAHC responded with results from the sacred lands file search request. The sacred lands search failed to indicate the presence of recorded Native American cultural resources on the Project site or in the vicinity. The NAHC additionally provided a list of Native American tribes and individuals/organizations that might have knowledge of cultural resources in this area.

The Proposed Project is subject to compliance with AB 52 (PRC Section 21074), which requires consideration of impacts to "tribal cultural resources" as part of the California Environmental Quality Act (CEQA) process, and requires the CEQA lead agency to notify any groups (who have requested notification) of the Proposed Project who are traditionally or culturally affiliated with the geographic area of the Project site. The City sent six letters (two were sent to the Federated Indians of Graton Rancheria to two different people) dated April 23, 2018, to tribes that have requested to be notified. The City received responses from the Federated Indians of Graton Rancheria and the Yocha Dehe Wintun Nation, but neither Tribe requested formal consultation with the City. Because AB 52 is a government-to-government process, all records of correspondence related to AB 52 notification and any subsequent consultation are on file with the City.

3.5.3 Regulatory Setting

The treatment of cultural resources is governed by federal, state, and local laws and guidelines. There are specific criteria for determining whether prehistoric and historic sites or objects are significant and/or protected by law. Federal and state significance criteria generally focus on the resource's integrity and uniqueness, its relationship to similar resources, and its potential to contribute important information to scholarly research. Some resources that do not meet federal significance criteria may be considered significant by state criteria. The laws and regulations seek to mitigate impacts on significant prehistoric or historic resources. The federal, state, and local laws and guidelines for protecting historic resources are summarized below.

Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966 established the NRHP as the official federal list of cultural resources that have been nominated by state offices for their historical significance at the local, state, or national level. Properties listed in the NRHP, or determined eligible for listing, must meet certain criteria for historical significance and possess integrity of form, location, and setting. Under Section 106 of the act and its implementing regulations, federal agencies are required to consider the effects of their actions, or those they fund or permit, on properties that may be eligible for listing or that are listed in the NRHP. The regulations in 36 Code of Federal Regulations (CFR) 60.4 describe the criteria to evaluate cultural resources for inclusion in the NRHP. Properties may be listed in the NRHP if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and they:

A. Are associated with events that have made a significant contribution to the broad patterns of our history;

B. Are associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history.

These factors are known as “Criteria A, B, C, and D.”

In addition, the resource must be at least 50 years old, except in exceptional circumstances. Eligible properties must meet at least one of the criteria and exhibit integrity, which is measured by the degree to which the resource retains its historical properties and conveys its historical character, the degree to which the original fabric has been retained, and the reversibility of the changes to the property. Archaeological sites are generally evaluated under Criterion D, which concerns the potential to yield information important in prehistory or history.

The Section 106 review process is typically undertaken between USACE as part of issuing a Section 404 permit and the SHPO, involves a four-step procedure:

- Initiate the Section 106 process by establishing the undertaking, developing a plan for public involvement, and identifying other consulting parties.
- Identify historic properties by determining the scope of efforts, identifying cultural resources, and evaluating their eligibility for inclusion in the NRHP.

- Assess adverse effects by applying the criteria of adverse effect on historic properties (resources that are eligible for inclusion in the NRHP).
- Resolve adverse effects by consulting with the State Historic Preservation Officer and other consulting agencies, including the Advisory Council on Historic Preservation, if necessary, to develop an agreement that addresses the treatment of historic properties.

The Department of the Interior has set forth Standards and Guidelines for Archaeology and Historic Preservation. These standards and guidelines are not regulatory and do not set or interpret agency policy. A project that follows the standards and guidelines generally shall be considered mitigated to a less than significant level, according to Section 15064.5(b)(3) of the CEQA Guidelines (14 CCR 15000 et seq.). Because it is not a federal agency, the City of St. Helena is not subject to the National Historical Preservation Act, including Section 106.

State Regulations

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to California Public Resources Code (PRC) Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." PRC Section 21083.2 requires agencies to determine whether proposed projects would have effects on "unique archaeological resources."

"Historical resource" is a term of art with a defined statutory meaning (see PRC Section 21084.1 and CEQA Guidelines, Sections 15064.5[a] and 15064.5[b]). The term embraces any resource listed in or determined to be eligible for listing in the CRHR. The CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be "historical resources" for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC Section 5024.1 and 14 CCR Section 4850). Unless a resource listed in a survey has been demolished or has lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource potentially eligible for the CRHR.

In addition to assessing whether historical resources potentially impacted by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the CRHR criteria prior to making a finding as to a proposed project's impacts to historical resources (PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a)(3)). In general, a historical resource, under this approach, is defined as any object, building, structure, site, area, place, record, or manuscript that (CEQA Guidelines Section 15064.5(a)(3)):

Is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California; and

A. Meets any of the following criteria:
    1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    2. Is associated with the lives of persons important in our past;
    3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
    4. Has yielded, or may be likely to yield, information important in prehistory or history.

These factors are known as "Criteria 1, 2, 3, and 4" and parallel Criteria A, B, C, and D under the National Historic Preservation Act. The fact that a resource is not listed or determined to be eligible for listing does not preclude a lead agency from determining that it may be a historical resource (PRC Section 21084.1 and CEQA Guidelines, Section 15064.5(a)(4)).

CEQA also distinguishes between two classes of archaeological resources: archaeological sites that meet the definition of a historical resource, as described above, and "unique archaeological resources." Under CEQA, an archaeological resource is considered "unique" if it (PRC 21083.2(g)):

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines states that if a proposed project would result in an impact that might cause a substantial adverse change in the significance of a historical resource, then an Environmental Impact Report (EIR) must be prepared and mitigation measures and alternatives must be considered. A "substantial adverse change" in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (Section 15064.5(b)(1)).

The CEQA Guidelines (Section 15064.5(c)) also provide specific guidance on the treatment of archaeological resources, depending on whether they meet the definition of a historical resource or a unique archaeological resource. If the site meets the definition of a unique archaeological resource, it must be treated in accordance with the provisions of PRC Section 21083.2.

CEQA Guidelines Section 15126.4(b) sets forth principles relevant to means of mitigating impacts on historical resources. It provides as follows:

> (1) Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (1995), Weeks and Grimmer, the project's impact on the historical resource shall generally be considered mitigated below a level of significance and thus is not significant.
>
> (2) In some circumstances, documentation of an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.
>
> (3) Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered and discussed in an EIR for a project involving such an archaeological site:
>
> (A) Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

(B) Preservation in place may be accomplished by, but is not limited to, the following:

1. Planning construction to avoid archaeological sites;
2. Incorporation of sites within parks, greenspace, or other open space;
3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.
4. Deeding the site into a permanent conservation easement.

(C) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation.

(D) Data recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center.

CEQA and the California Public Records Act restrict the amount of information regarding cultural resources that can be disclosed in an EIR in order to avoid the possibility that such resources could be subject to vandalism or other damage (*Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App.4th 200, 219). The State CEQA Guidelines prohibit an EIR from including "information about the location of archaeological sites and sacred lands, or any other information that is subject to the disclosure restrictions of Section 6254 of the Government Code [(part of the California Public Records Act)]" (Section 15120(d)). In turn, California Government Code Section 2654 of the California Public Records Act lists as exempt from public disclosure any records "of Native American graves, cemeteries, and sacred places and records of Native American places, features, and objects described in Sections 5097.9 and 5097.933 of the [California] Public Resources Code maintained by, or in the possession of, the Native American Heritage Commission, another state agency, or a local agency" (Cal. Gov. Code, Section 6254(r)).

PRC Section 21074 defines tribal cultural resources and Sections 5097.9 and 5097.993 of the Code list the Native American places, features, and objects, the records of which are not to be publicly disclosed under the California Public Records Act: “any Native American sanctified cemetery, places of worship, religious or ceremonial site, or sacred shrine located on public property (Section 5097.9) and any “Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register of Historic Resources…, including any historic or prehistoric ruins, any burial ground, any archaeological or historic site, any inscriptions made by Native Americans at such a site, any archaeological or historic Native American rock art, or any archaeological or historic feature of a Native American historic, cultural, or sacred site” (Section 5097.993(a)(1)).

The Public Resources Act also generally prohibits disclosure of archaeological records. Government Code Section 6254.10 provides: “Nothing in [the California Public Records Act] requires disclosure of records that relate to archaeological site information and reports maintained by, or in the possession of … a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency.”

CEQA Guidelines Section 15064.5(e), require that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as identified in a timely manner by the Native American Heritage Commission. Section 15064.5 of the CEQA Guidelines directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

Senate Bill 297

This law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction; and establishes the Native American Heritage Commission to resolve disputes regarding the disposition of such remains (Senate Bill 297). It has been incorporated into Section 15064.5(e) of the CEQA Guidelines.

Assembly Bill 52

AB 52 requires consultation with Native American tribes traditionally and culturally affiliated with the geographic area in which a project requiring CEQA review is proposed if those tribes have requested to be informed of such proposed projects. The intention of such consultation is to

avoid adverse impacts to tribal cultural resources. This law is in addition to existing legislature protecting archaeological resources associated with California Native American tribes. AB 52 applies to all projects initiating environmental review in or after July 2015. The Proposed Project is subject to AB 52 and the City sent letters to all tribes requesting notification.

California Health and Safety Code

Section 7050.5(b) of the California Health and Safety Code specifies protocols to address any human remains that may be discovered. The code states the following:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in section 5097.98 of the Public Resources Code.

Local Regulations

The following local/regional regulations pertaining to cultural and historic resources would apply to the Proposed Project.

City of St. Helena 1993 General Plan

The Historic Resources Element of the St. Helena 1993 General Plan provides objectives, policies, and programs regarding cultural resources, including the following:

> **Policy 7.5.1:** Preserve the City's historic and cultural resources as they contribute to the special character and quality of the City and help support its economic base.
>
> **Policy 7.5.4:** Include the preservation of the City's historic resources in all future planning decisions where identified historic resources may be affected.
>
> **Policy 7.5.5:** Recognize the Historic Resources Inventory as the City's official list of historic resources.
>
> **Policy 7.5.6:** Use the Historic Resources Inventory in future planning decisions.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The Historic Resources Element of the City's adopted General Plan provides objectives, policies, and programs regarding cultural resources, including the following that are relevant to the Proposed Project:

> Historic Resources Element
>
> **Policy HR1.1:** Preserve the City's historic and cultural resources, so that they may contribute to the special character and quality of the City and support its economic base.
>
> **Policy HR1.5:** For development and redevelopment proposals in archaeologically, tribal cultural, and paleontologically sensitive areas of St. Helena, require an assessment of the potential presence of archaeological, tribal cultural and paleontological resources, including a site survey and a records search of the California Historical Resources Information System at the Northwest Information Center (NWIC). As warranted by the results of the assessment, require additional studies to identify and address project-specific impacts on archaeological, tribal cultural, and paleontological resources. The City shall incorporate the study recommendations as project conditions of approval to ensure that impacts on archaeological, tribal cultural, and/or paleontological resources are mitigated to the extent possible. Studies shall be prepared according to National Register Bulletin 24: Guidelines for Local Surveys: A Basis for Preservation Planning and the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

3.5.4 Impacts

Methods of Analysis

As described above, a Cultural Resources Inventory and Extended Phase I and Phase II Report was prepared for the Proposed Project in March 2020 (Appendix E). The inventory included a review of the CHRIS records search provided by the NWIC, NAHC sacred lands file search, Native American coordination, historic research, an intensive pedestrian survey, XPI investigations, Phase II excavation, and ground penetrating radar. The study also reviewed historical aerials and topographic maps. The CHRIS records search included a review of their collection of mapped prehistoric, historical and built-environment resources, Department of Parks and Recreation (DPR) Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources included the NRHP, California Inventory of Historical Resources/CRHR and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and Caltrans Bridge Survey information.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impacts and Mitigation Measures

3.5-1: Would the Proposed Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5? This impact would be potentially significant.

The City is the lead agency responsible for compliance with CEQA. The Proposed Project is also assumed to be subject to Section 106 compliance due to future review by USACE to authorize fill of existing wetlands prior to issuance of a grading permit for the Proposed Project (see Section 3.4, Biological Resources). According to CEQA (PRC Section 5024.1, Title 14 CCR, Section 4852), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect (adverse effect) on the environment and the cultural resource itself. A substantial adverse change in the significance of an historical resource would be constituted by physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.

Effects on historic properties under Section 106 of the NHPA are defined in the assessment of adverse effects in 36 CFR Section 800.5(a)(1). An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. To comply with Section 106, the criteria of adverse effect are applied to historic properties, if any exist in the Project site. If no historic properties are identified in the Project site, a finding of "no historic properties affected" would be made for the Proposed Project. If there are historic properties in the Project site, application of the criteria of adverse effect would result in Proposed Project–related findings of either "no adverse effect" or of "adverse effect". There are no historic buildings present on the Project site that could be affected by construction activities. However, archaeological resource CA-NAP-406 which intersects the Project site has been determined to be eligible for CRHR and NRHP listing.

Consistent with 1993 General Plan Policies 7.5.5 and 7.5.6, and 2019 General Plan Policy HR1.5, a records search was conducted and in-depth testing was done on the Project site to determine the sensitivity of the site to contain subsurface resources. Inventory efforts associated with the Cultural Inventory and Extended Phase I and II Report (Appendix E) conducted for the Proposed Project identified three previously identified archaeological sites within the Project site (CA-NAP-406, CA-NAP-843, and CA-NAP-1008). An additional five archaeological sites have been identified in the immediate vicinity of the Project site. One recorded site within the Project site has been determined NRHP/CRHR eligible. CA-NAP-406 has been determined with SHPO occurrence to be eligible for listing in the NRHP listing under Criterion D. Resources CA-NAP-843 and CA-NAP-1008 were determined with SHPO concurrence to lack sufficient data potential and integrity to meet the criteria for NRHP/CRHR eligibility.

Resources CA-NAP-843 and CA-NAP-1008 have been subject to previous evaluation efforts as part of the prior Flood Protection Project and are not NRHP/CRHR eligible. Therefore, the Cultural Inventory and Extended Phase I and Phase II Report determined that impacts to CA-NAP-843 and CA-NAP-1008 would not represent a significant effect, although appropriate mitigation to account for unanticipated impacts would be required.

Resource CA-NAP-406 has been determined to be eligible for CRHR (Criterion 4) and NRHP (Criterion D) listing. However, previous investigations evaluating this resource were restricted to portions of this resource located immediately west of the Project site. Based on the results of the Phase I and Phase II archaeological excavations and a GPR investigation no intact deposits or

features associated with CA-NAP-406 appear to extend to within the Project site. It is likely that this upper layer of fill present on a majority of the site is comprised largely of redeposited and otherwise disturbed cultural deposits associated with CA-NAP-406. Soils identified below the fill were not found to contain cultural deposits or substantial frequencies of cultural material. However, because there is the potential to unearth unknown resources during Proposed Project construction and due to the presence of recorded resources nearby the impact is considered **potentially significant.**

Mitigation Measures

Compliance with Mitigation Measure CUL-1 would ensure the proper procedures and protocol are in place in the event a resource is identified. The procedures require work to stop in the event a resource is discovered and an archaeologist and/or Native American representative contacted to determine the appropriate course of action depending on the resource. Compliance with this measure, along with PRC Section 5097.98, Section 7050.5 of the California Health and Safety Code, and Section 15064.5(e) of the CEQA Guidelines. Adherence to this mitigation measure would ensure impacts would be reduced to less than significant.

CUL-1: The City shall require that an archaeological monitor is present during all ground-disturbing activities with the potential to impact previously identified cultural resources or to encounter unanticipated cultural deposits including tribal cultural resources. The determination for a Native American monitor to be present shall be made by the City, in consultation with the appropriate Native American tribe prior to the initiation of ground disturbing activities. In addition, prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. Areas observed to have potential to contain yet-identified subsurface cultural material or deposits are located throughout the Project site, but primarily would be in the western portion of the site where the existing vineyard is located. It is anticipated resources would not be present in depths of more than 10 feet below the surface. Archaeological and Native American monitoring may be adjusted at the recommendation of the qualified archaeological principal investigator, meeting the Secretary of the Interior Professional Qualifications for Archaeology, and in consultation with the City, based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material.

The archaeological and tribal monitors shall be provided a copy of technical reports prepared for the Project and pertinent appendices to inform their monitoring efforts. The archaeological and tribal monitors shall have the authority

to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until the qualified archaeological principal investigator, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted, in consultation with the Tribe. Should it be determined by the Tribe and the archeologist, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. As approved by the City, in consultation with the Tribe this buffer may be adjusted by the Tribe and the archaeological principal investigator to a distance that maintains a protective perimeter around the unanticipated resource, while still allowing for construction to continue in the surrounding area.

3.5-2: Would the Proposed Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? This impact would be potentially significant.

As described in Impact 3.4-1, the Cultural Inventory and Extended Phase I and Phase II Report (Appendix E) conducted for the Proposed Project three archeological sites were previously identified within the Project site (CA-NAP-406, CA-NAP-843, and CA-NAP-1008), two of which (CA-NAP-843 and CA-NAP-1008) were determined not to be NRHP/CRHR eligible. The Cultural Inventory Report determined that impacts to CA-NAP-843 and CA-NAP-1008 would not represent a significant effect, although appropriate mitigation to account for unanticipated impacts would be required. Resource CA-NAP-406 has been determined to be eligible for CRHR (Criterion 4) and NRHP (Criterion D) listing.

As discussed above under Impact 3.5-1, the Phase I and Phase II archaeological excavations and GPR investigation did not identify any intact deposits or features associated with CA-NAP-406 within the Project site. However, the report notes that such deposits have the highest potential to be present beneath redeposited and disturbed fill areas located north of the planned Starr Avenue expansion, as well as portions of the Project site to the south, presently occupied by vineyards, have a higher potential to contain intact cultural deposits at shallower depths. Due to the sensitivity of the site for unknown archeological resources that may be present subsurface that could be unearthed during construction activities this is considered a **potentially significant impact.**

Mitigation Measure

Implementation of Mitigation Measure CUL-1 provides specific procedures to follow in the event a resource is identified. The procedures require work to stop in the event a resource is discovered and an archaeologist and/or Native American representative contacted to determine the appropriate course of action depending on the resource. Compliance with this measure, along with PRC Section 5097.98, Section 7050.5 of the California Health and Safety Code, and Section 15064.5(e) of the CEQA Guidelines, would ensure that potential impacts to previously unidentified subsurface resources are mitigated to less than significant and no additional mitigation is required.

3.5-3: Would the Proposed Project disturb human remains, including those interred outside of formal cemeteries? This impact would be less than significant.

The NWIC records search conducted for the Cultural Inventory and Extended Phase I and Phase II Report indicated that thirty cultural resources have been recorded within the records search area (Appendix E). As described above, work for the Flood Protection Project resulted in a substantial level of previous archaeological investigation work along the western and northern portions of the Project site. This work has demonstrated the area to contain significant and highly sensitive archaeological resources. As part of the Flood Protection Project a total of 163 human burials were recovered from one site (CA-NAP-399), the largest number of burials recovered from a single site in Napa Valley to date (Schneider et al. 2013: 44). Human remains were not documented within archaeological resources intersecting the Project site. The Phase II testing conducted for the Proposed Project by Dudek included GPR which looks for any subsurface anomalies to a depth of approximately 26 feet below the surface. Any potentially sensitive GPR anomaly was ground-truthed and no cultural features were identified as a result of these efforts. Nevertheless, due to the high archeological sensitivity of the area around the Project site, it is possible to inadvertently uncover human remains during ground-disturbing Proposed Project activities, such as grading and excavation. This is considered a **potentially significant impact.**

Mitigation Measures

Implementation of Mitigation Measure CUL-2 provides specific procedures to follow in the event human remains are identified. The procedures require work to stop and the County Coroner contacted to determine the origins of the remains. Compliance with this measure, along with PRC Section 7050.5 of the California Health and Safety Code would ensure that potential impacts to any human remains are mitigated to a less-than-significant level.

CUL-2: In the event any human remains are unearthed during site disturbing activities, Section 7050.5(b) of the California Health and Safety Code and Section 15064.5(e) of the CEQA Guidelines specifies protocols to follow in the event

human remains are discovered. The Code mandates stopping work within 100 feet of the find and contacting the County Coroner to determine the origin of the remains. If the remains are determined to be Native American the Coroner shall contact the Native American Heritage Commission within 24 hours to request that the Commission determine the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent shall be provided with the opportunity to make recommendations regarding the means of treating or disposing of the remains with appropriate dignity. Project-related ground disturbance in the vicinity of the find shall not resume until all statutory requirements have been met and evidence of completion has been submitted to the City, in consultation with the Tribe.

3.5-4: Would the Proposed Project cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or a resource determined by the lead agency to be significant? This impact is potentially significant.

Dudek contacted the NAHC to request a review of the sacred lands file. The NAHC responded to Dudek's request, stating that the sacred lands file search was conducted with "negative results." The City sent letters to all California Native American tribes traditionally and culturally affiliated with the Proposed Project area requesting notification pursuant to AB 52. None of the tribes contacted requested consultation pursuant to PRC Section 21080.3.1. The Yocha Dehe Wintun Nation requested to review a copy of the Cultural Report which was provided to the Tribe by the City for their review on May 18, 2020.

Based on a review of the Cultural Resources evaluation conducted for the Project site and letters provided by the Tribes in response to letters sent by the City pursuant to AB 52, there are no known TCRs present, as defined in PRC Section 21074, on the Project site or in its immediate vicinity. The general area was previously documented to be of importance to traditionally geographically affiliated tribes through the Flood Protection Project, and active outreach with these parties should continue into the future. The Project site is undeveloped, although has been subject to substantial previous disturbance and has historically been used for agriculture. The CHRIS records search conducted for the Proposed Project area did not identify any previously recorded TCRs on the Project site (Appendix E).

As previously stated, archaeological sites have been identified on the Project site and in the immediate vicinity during the records search and verified during the intensive Phase I and Phase II testing conducted on the Project site. Resource CA-NAP-406 was determined to be eligible for CRHR and NRHP listing, although this resource is not identified as a TCR. Due to the sensitivity

of the site for unknown archeological resources that could be unearthed during construction activities, it was determined there would be a potentially significant impact to archaeological resources. Given the sensitivity of the site for cultural resources, the potential for unknown tribal cultural resources to be encountered during Proposed Project ground-disturbing activities also exists. Therefore, this is considered a **potentially significant impact**.

Mitigation Measures

While no known TCRs have been identified that may be affected by the Proposed Project, implementation of Mitigation Measure CUL-1 would require construction work to stop and a Native American representative contacted (if not already conducting on-site monitoring) if any TCRs are unearthed and appropriate measures to be implemented to evaluate the significance of the find. Compliance with Mitigation Measure CUL-1 would ensure potential impacts would be less than significant and no additional mitigation is required.

3.5.5 Cumulative Impacts

The geographic scope of the cumulative impact analysis for the evaluation of potential cumulative impacts on cultural resources is the City of St. Helena.

3.5-5: Would the Proposed Project contribute to cumulative impacts to cultural resources, including historical and archeological resources as defined in CEQA Guidelines Section 15064.5 and human remains? The Project's contribution would be considered potentially significant.

Several historical resources and prehistoric and archeological sites have been recorded within the City, including both on and adjacent to the Project site. Development in the region could result in the damage or destruction of known and unknown archaeological and historical resources, as well as any existing undiscovered subsurface artifacts. The cumulative impact from past, present, and probable future projects, as well as the Proposed Project, is potentially significant.

The 1993 General Plan EIR concluded that the 1993 General Plan could result in substantial adverse changes in the significance of historical resources, and would have a significant and unavoidable impact to prehistoric archaeological sites that may contain human remains with religious significance to local Native American groups (City of St. Helena 2010). The 1993 General Plan states that there are a number of historic resources in the City (dating from the mid-nineteenth to mid-twentieth century) vulnerable to incompatible alterations and demolition. However, the Proposed Project does not include any known historic resources from this time period. The 2019 General Plan EIR concluded that impacts on cultural resources, including historic, archeological and prehistoric associated with buildout of the city would not result in a significant impact (City of St. Helena 2018). The EIR notes that compliance with 2019 General

Plan Policy HR1.5 would minimize or avoid potential impacts on any resources known or not known at this time and that may be encountered in the future. In addition, there are numerous laws, regulations, and statutes, on both the federal and state levels, that seek to protect cultural resources. These would apply to development within and outside the city. However, because the Project site contains a high likelihood for the discovery of unknown subsurface historical or prehistoric resources, the Proposed Project's contribution to the cumulative loss of cultural resources is considered **potentially significant.**

Mitigation Measures

Implementation of Mitigation Measure CUL-1 provides specific procedures to follow in the event a resource is identified. The procedures require work to stop in the event a resource is discovered and an archaeologist and/or Native American representative contacted to determine the appropriate course of action depending on the resource. Compliance with this measure, along with PRC Section 5097.98, Section 7050.5 of the California Health and Safety Code, and Section 15064.5(e) of the CEQA Guidelines, would ensure that potential impacts to previously unidentified subsurface resources are mitigated to a less-than-significant level and the Proposed Project's incremental contribution would be reduced to less than significant and no additional mitigation is required.

3.5-6: Would the Proposed Project contribute to cumulative impacts to tribal cultural resources, currently listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or a resource determined by the lead agency to be significant? The Project's contribution would be potentially significant.

As stated previously, the 1993 General Plan EIR determined that there would be a significant and unavoidable impact to prehistoric archaeological sites that may contain human remains with religious significance to local Native American groups (City of St. Helena 2010). However, the City of St. Helena General Plan Update EIR identified that development under the City's 2019 General Plan would result in less-than-significant impacts to TCRs. Policy HR1.5 in the 2019 General Plan would minimize or avoid potential impacts on any resources known or not known at this time that may be encountered in the future and would promote coordination with Native American tribes if any tribal resources are discovered at development sites. The impact on Native American tribal cultural resources was therefore determined to be less than significant.

Numerous laws, regulations, and statutes, on both the federal and state levels, seek to protect cultural resources. These would apply to development within and outside the city. In addition, General Plan policies are designed to safeguard cultural resources from unnecessary impacts. Because all significant tribal cultural resources are unique and non-renewable members of finite

classes, all adverse effects or negative impacts erode a dwindling resource base. Although unlikely, there is the potential the Proposed Project could adversely affect significant tribal cultural resources that are unique and non-renewable members of finite classes if discovered contributing to a potentially considerable contribution. Therefore, the Proposed Project's incremental contribution to the cumulative loss of cultural resources is considered **potentially significant.**

Mitigation Measures

Implementation of Mitigation Measure CUL-1 provides specific procedures to follow in the event a TCR is identified. The procedures require work to stop in the event a resource is discovered and an archaeologist and/or Native American representative contacted to determine the appropriate course of action depending on the resource. Compliance with this measure, along with PRC Section 5097.98, Section 7050.5 of the California Health and Safety Code, and Section 15064.5(e) of the CEQA Guidelines, would ensure that potential impacts to TCRs are mitigated to a less-than-significant level and the Proposed Project's incremental contribution would be reduced to less than significant and no additional mitigation is required.

3.5.6 References

City of St. Helena. 1993. City of St. Helena 1993 General Plan. September 28, 1993.

City of St. Helena. 2010. St. Helena General Plan Update. Prepared by ESA. August 2010.

City of St. Helena. 2018. St. Helena General Plan Update 2040 Draft Environmental Impact Report SCH# 2010042001. October 23, 2018.

City of St. Helena. 2019. St. Helena General Plan Update 2040. June 2019.

Dudek. 2020. Cultural Resources Inventory, Extended Phase I and Phase II Report for the Hunter Subdivision Project, Napa County, California (Confidential Report). May 2020.

3.6 GEOLOGY AND SOILS

3.6.1 Introduction

This section evaluates the potential effects on geologic and soil resources as well as paleontological resources associated with development of the proposed Hunter Subdivision Project (Proposed Project). This section describes the geologic setting and soil resources located on the Project site and within the Proposed Project's surrounding area, as well as the applicable federal, state, and regional regulations pertaining to geologic and soil resources.

There were no comments received in response to the Notice of Preparation specifically related to geological impacts. A copy of the Notice of Preparation and comments received is included in Appendix A. Comments related to conversion of prime agricultural farmland and excess runoff and erosion are addressed in Section 3.2, Agriculture and Forestry Resources, and Section 3.9, Hydrology and Water Quality, respectively.

Information contained in this section is based on Project site plans, City of St. Helena (City) planning documents (including the 1993 General Plan, the 2019 General Plan, and the 2019 General Plan Draft Environmental Impact Report), geotechnical engineering reports prepared for the Proposed Project, and publicly available maps, data and reports from the U.S. Geological Survey (USGS), U.S. Department of Agriculture, and the California Geological Survey. Other sources consulted are listed in Section 3.6.6, References. Copies of the geotechnical reports prepared for the Project site are included in Appendix F.

3.6.2 Environmental Setting

This section describes the existing environmental setting of the region and Project site and identifies the resources that could be affected by the Proposed Project, or which could affect the Proposed Project.

Regional Physiography

The Project site is located within California's Coast Ranges Geomorphic Province, a geologically young and seismically active region. A conspicuous characteristic of this province, including Napa County, is the general northwest-southeast orientation of physiographic features such as valleys and ridgelines. The City of St. Helena is situated within the Napa Valley floor, bounded by the Mayacamas Mountain Range on the western and northern sides and the Vaca Mountains on the eastern side. These ranges consist of Sonoma Volcanics (Pliocene rhyolite, dacite, tuff, and pyroclastic rocks) overlying Franciscan Complex mélange (sandstone, shale, chert, conglomerate, and greenstone). The region is located within the Napa Valley American Viticultural Area and is known for the agriculture that characterizes the valley. The Napa River bisects the valley and flows through the eastern portion of the city. The City's terrain ranges from flat agricultural areas to gently rolling foothills.

Site Setting

The northern edge of the Project site is located approximately 500 feet southwest of the southeasterly flowing Napa River, on a flat alluvial floodplain formed by the river and its tributaries. Important tributaries to the Napa River in the city include York Creek, which discharges into the Napa River approximately one mile further upstream from the Project site, and Sulphur Creek, which discharges into the Napa River approximately a quarter-mile further downstream. The geology of the site is dominated by unconsolidated Quaternary age[1] alluvium, with the northern half of the site consisting of an alluvial terrace deposits formed by the Napa River, and the southern half of the site consisting of the distal end of alluvial fans formed by the northeasterly-flowing streams coming out of the Mayacamas Mountains.

Topography

Based on the Proposed Project's grading plan, the elevation across the Proposed Project's development footprint ranges from approximately 230 feet above mean sea level on its southern edge to approximately 212 feet above mean sea level on its northern edge. The average slope gradient across the development footprint is less than 1.5% toward the north and east. There is a slight break in slope near the center of the site, where a gentle (nearly imperceptible) slope transitions to a flat surface. This slight break in slope is coincident with the historical extent of the Napa River floodplain that existed prior to the completion of the City's Flood Protection Project that constructed a levee along the Napa River in 2010 that now provides a 200-year level of flood protection. Prior to 2010, the topography of the site was slightly different, as mass grading associated with construction of the off-site levee and detention basin resulted in filling in a former pond and placement of a thin layer of engineered fill over portions of the Project site.

The portion of the site planned for the extension of Adams Street ranges from 243 feet to 230 feet above mean sea level, with a gradual slope of 1.5%.

Geology

The Project site is underlain by unconsolidated Holocene[2] age alluvial deposits. These deposits consist of alluvial fan and fluvial deposits, which are typically composed of varying mixtures of clay, silt, sand, gravel and cobbles, depending on location. As mapped by the U.S. Geological Survey (USGS 2007), the Project site is underlain by the following two geologic units, shown in Figure 3.6-1, Geologic Map:

[1] The Quaternary is a geologic period representing the last 2.5 million years and consists of the Pleistocene epoch and the more recent Holocene epoch.

[2] The Holocene is a geologic epoch lasting from 11,700 years ago (+/- 100 years) to the present day.

- Terrace deposits (Qht): Terrace deposits consist of moderately well sorted sand, silt, gravel, and minor clay deposited in point bar and overbank settings. Mostly undissected[3] by later erosion.
- Alluvial fan deposits (Qhf): Alluvial fan deposits consist of moderately to poorly sorted and moderately to poorly bedded sand, gravel, silt and clay deposited where streams emanate from upland regions onto valley floors or plains. The alluvial fans deposits are mostly undissected by later erosion. In places, Holocene deposits may only form a thin layer over Pleistocene and older deposits.

The surface boundary between these two geologic units, shown in Figure 3.6-1, is coincident with the aforementioned topographic break in slope. Based on regional work in reconstructing the subsurface geology exposed in water well driller logs, it is estimated that the Quaternary age alluvium extends to a depth of between 50 and 100 feet below the ground surface (bgs), with Tertiary age[4] sedimentary and volcanic rocks (e.g., Sonoma Volcanics) extending below that to over 500 feet bgs (LSCE and MBK 2013).

Geologic units can contain several types of soils that generally have similar properties or are from the same time period and formed in similar ways. Below is a description of the soils present on the Project site.

Soils

The top 5 feet of the geologic units described above is characterized by a mantle of soil that varies in thickness and character. In general, soil characteristics are strongly governed by slope, relief, climate, vegetation, and the geologic unit upon which they form. Soil types are important in describing engineering constraints such as susceptibility to soil erosion (from both water and wind), corrosion risks, and various behaviors that affect structures, such as expansion and settlement. The type, aerial extent, and some key physical and hydrological characteristics of soils within the Project site were identified based on a review of a soil survey of Napa County completed by the U.S. Department of Agriculture's Natural Resources Conservation Service (USDA 2019). Soil units are described in Table 3.6-1 and shown in Figure 3.6-2, Soils.

[3] This term refers to the degree to which streams have incised into the surface.
[4] Teriary is a geologic period between 2.5 million and 65 million years ago.

Table 3.6-1
Soil Map Units Within the Project Site

Soil Unit	Acres / Percent of Project Area	Depth (inches)	Shrink/Swell Potential1	Corrosion Risk2		Erosion and Runoff	
				Uncoated Steel	*Concrete*	*Hydrologic Soil Group3*	*Erosion Factor (Kf)4*
Bale clay loam, 0% - 2% slope	3.6 / 22%	60	Low (0% – 2.9%) to Moderate (3% – 5.9%)	High	Low	B	0.2
Bale clay loam, 2% - 5% slope	8.5 / 53%	60	Low (0% – 2.9%) to Moderate (3% – 5.9%)	High	Low	B	0.2
Cole silt loam, 0% - 2% slope	3.5 / 22%	64	Low (2.3% – 4.1%) to High (5.7% – 8.3%)	High	Low	C	0.37
Cortina very gravelly loam, 0% - 5% slope	0.6 / 3%	60	Low (0% – 2%)	Low	Low	A	0.43

Source: USDA 2019.
Notes:

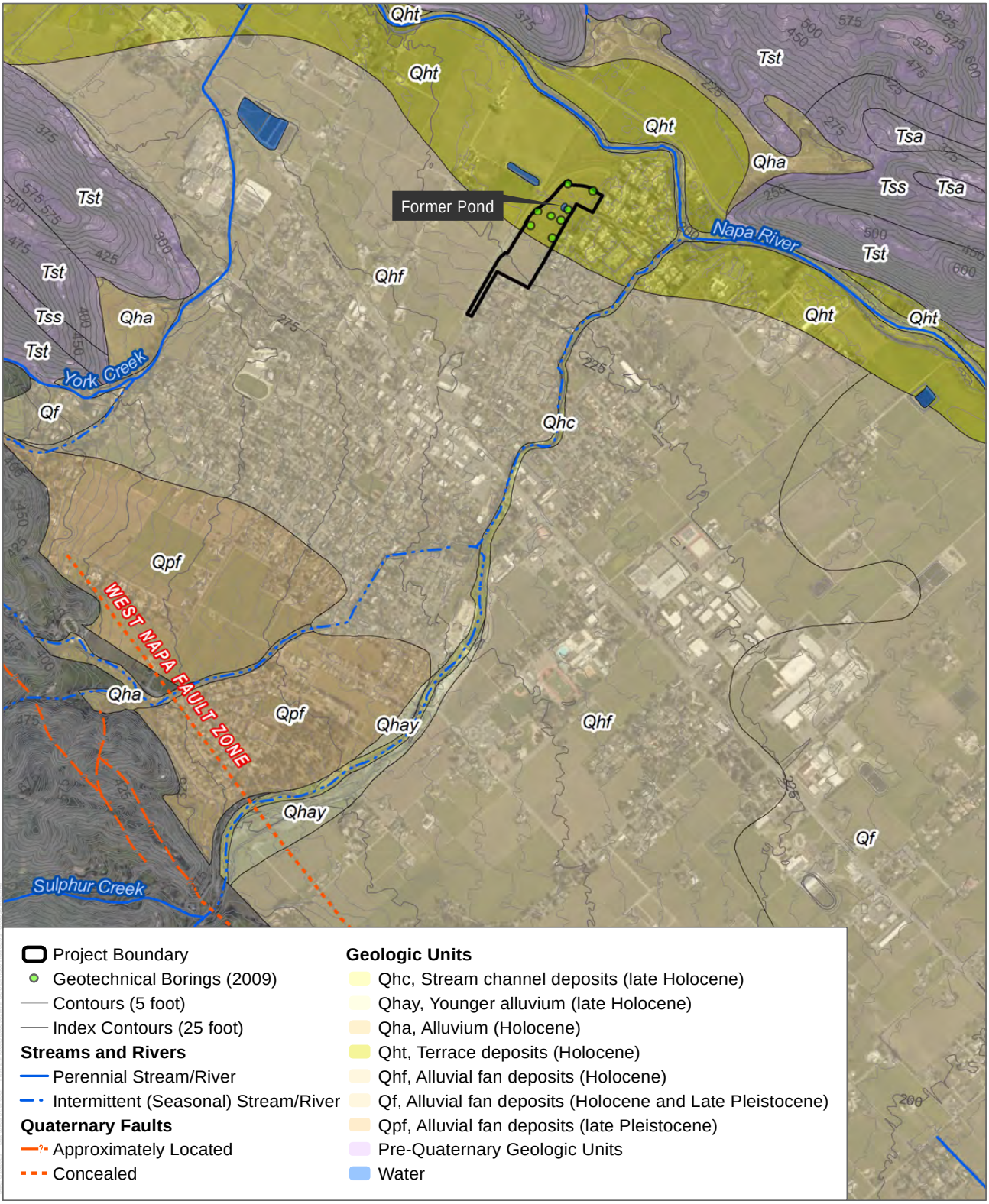
1 "Shink/Swell potential" of soils pertains to the volume change experience by soils, particularly clays, under cycles of wet and dry conditions. This is measured by the linear extensibility of soils, or the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The shrink/swell potential is low if the soil has a linear extensibility of less than 3%; moderate if 3% to 6%; high if 6% to 9%; and very high if more than 9%. The ratings reported in this table refer to the range of soil horizons present within the soil map unit.

2 "Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete.

3 Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups (A through D) according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. Soils in Group B have a moderate infiltration rate and a moderate rate of water transmission. Soils in Group C have a slow infiltration and transmission rates and consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. Soils in Group D have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

4 Erosion factor Kf indicates the susceptibility of a soil to sheet and rill erosion by water. Values of Kf are provided for the surface soil horizon. Values range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Geotechnical exploration of the Project site was completed by Miller Pacific Engineering Group, which provides site-specific details about shallow subsurface conditions (see Appendix F for the reports). The geotechnical exploration consisted of ten shallow exploratory borings drilled in 2009 using a 4-inch manual bucket auger and associated laboratory testing of selected soil samples (Appendix F). The location of the exploratory borings are shown in Figure 3.6-1. In late 2010, to update site conditions following completion of the City's Flood Protection Project, Miller Pacific Engineering Group conducted and reviewed field density testing to determine the relative compaction of recently placed fill. More recently, Miller Pacific Engineering Group provided a review of the liquefaction potential on the Project site (Appendix F).



SOURCE: Bing Maps 2019, USGS 2019 (National Hydrography Dataset), USGS 2007

DUDEK

0 800 1,600 Feet

FIGURE 3.6-1

Geologic Map

Hunter Subdivision Project

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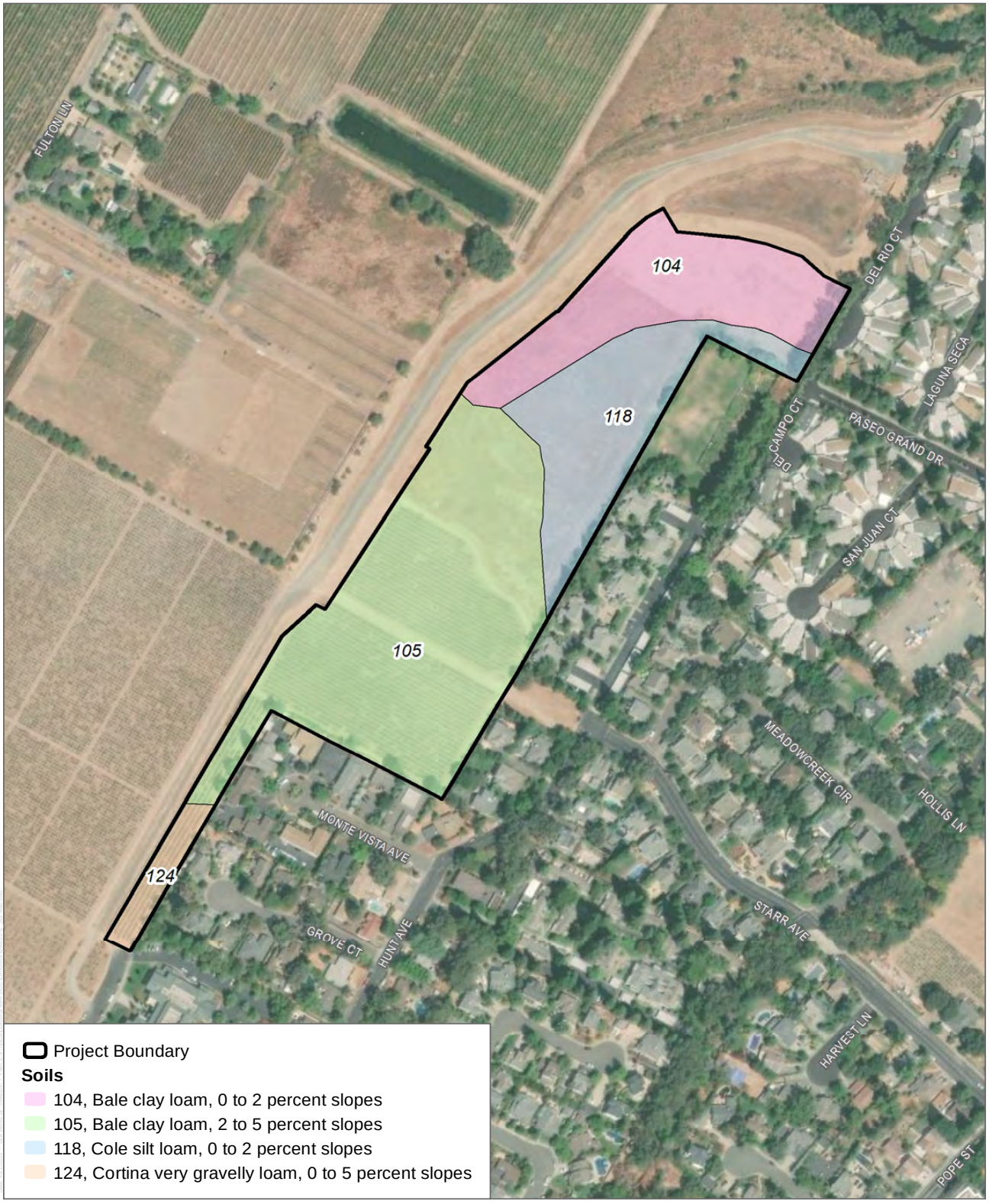

SOURCE: Bing Maps 2019, USDA 2019

DUDEK

0 250 500 Feet

FIGURE 3.6-2
Soils
Hunter Subdivision Project

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Based on geotechnical exploration, the subsurface consists of clayey silts with varying character (e.g., stiffness, color, moisture, grain size distribution). There is a 1–4-foot thick mantle of recent, compacted fill that was placed over much of the site, with deeper fill extending up to 10 feet bgs where the former pond was filled (the former pond location is shown on Figure 3.6-1). This occurred in 2010 when the City's Flood Protection Project was completed. Below the compacted fill is a 0.5–1.5-foot layer of stiff, relatively dry light brown clayey silt with some sand underlain by soft to medium stiff dark brown clayey silt to a depth of 4–7 feet. Based on laboratory testing of soil samples, there is an approximately three-foot thick layer of soft, weak natural soil that remains beneath the recently placed and compacted fill layer that does not meet American Society of Testing and Materials (ASTM) standards for optimum soil moisture and compaction (Appendix F).

Paleontological Resources

The City recently approved a new General Plan in June 2019 and certified the 2019 General Plan Environmental Impact Report. That Environmental Impact Report provides a description of the paleontological resources for each geologic unit mapped within the City's planning area (City of St. Helena 2018). The City's 1993 General Plan did not include any discussion pertaining to paleontological resources. Although there have been no recorded fossil finds within the City's boundaries (including a search of the University of California Museum of Paleontology specimen database), Pleistocene[5] age Quaternary deposits are described as potentially fossil bearing, possibly containing significant Rancholabrean fossils (126,000 to 10,000 years B.P.). Fossils found in alluvium of this age include, but are not limited to, bison, mammoth, ground sloths, sabertoothed cats, dire wolves, horses, cave bears, rodents, birds, reptiles, and amphibians. Older Pleistocene deposits typically occur as terraces incised by Holocene fluvial drainages. Due to their young age, Holocene alluvium is not considered potentially fossil bearing, since insufficient time has passed to result in fossilization of buried flora and fauna.

Although the Proposed Project is mapped at the surface as consisting of Holocene alluvium, which has a low paleontological potential, it may be underlain at unknown depths by Pleistocene alluvial fan deposits. Subsurface logs completed for geotechnical work or well drilling purposes do not typically differentiate between Holocene and Pleistocene age sediments, as they are mainly concerned with soil texture, and because both units are similar in that they consist of various layers of unconsolidated sediment (i.e., sand, gravel, silt and clay). However, Holocene alluvium extends down to at least 4 feet, as evidenced by the discovery of archeological resources down to that depth (see Section 3.5, Cultural Resources for additional information on the excavations conducted for the presence of subsurface archeological resources).

[5] The Pleisticene is a geologic epoch lasting from 11,700 years ago (+/- 100 years) to 2.5 million years ago.

Furthermore, based on the distance to the closest surface expressions of Pleistocene alluvium, which occur over a mile to the southwest (USGS 2007) and the proximity of the Napa River, the Holocene alluvium mapped within the Project site is likely of considerable thickness. However, because the subsurface boundary between Holocene and Pleistocene units has not been confirmed/verified, it is assumed for the purpose of the analysis that deeper excavations (beyond 4 feet in depth) could encounter older Pleistocene age alluvium.

Geologic Hazards and/or Soil Constraints

The following describes the potential geologic hazards and/or soil constraints potentially applicable to the site, based on the mapped soils and subsurface geotechnical investigation.

Slope Failures and/or Mudflows

The Napa Valley floor, including the majority of the City is mapped by the U.S. Geological Survey as being stable in terms of slope stability; for example, areas of less than 5% slope that are not underlain by landslide deposits (City of St. Helena 2018). The Project site is on flat to gentle slopes and therefore is not at risk of experiencing landslides. The eastern flank of the Mayacamas Mountains to the west may be the source of landslide or mudflows; however, as it is more than a mile away, the site is not subject to landslide or mudslide runout. The hills on the east side of the valley are closer (0.3–0.5 miles to the northeast), but the Project site is protected by a levee and thus would not be subject to mudslide runout from the east either.

Expansive and/or Corrosive Soils

Expansion and contraction of soil volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. As a consequence of such volume changes, structural damage to building and infrastructure may occur if the potentially expansive soils were not considered in building design and during construction. Corrosivity is a function of the chemical composition of the soils, and the materials from which it is derived. If not addressed by design measures and proper selection of building materials, corrosive soils could cause substantial damage to building foundations, pavements, utilities, and/or other improvements.

The northern part of the Project site is underlain by the Bale clay loam, which has low to medium shrink/swell potential, as shown in Table 3.6-1. The southern part of the site is underlain by the Cole silt loam which has a low to high shrink/swell potential (generally increasing with depth). The Cortina very gravelly loam underlies the southernmost portion of the site and has a low shrink/swell potential. The Bale and Cole soils generally have a high corrosion potential to steel, and low corrosion potential for concrete. The Cortina very gravelly loam has a low corrosion potential for both steel and concrete (Table 3.6-1).

Soil Settlement and/or Collapse

Soil settlement or differential settlement could occur if buildings or other improvements were built on low-strength foundation materials (including imported fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and fill). Although differential settlement generally occurs slowly enough that its effects are not dangerous to site inhabitants, it can cause significant building damage over time. Settlement or collapse has the potential to occur if buildings or other improvements were built on materials which are not suited for foundations of structures. As discussed above, the subsurface investigation of the site found that there is an approximately 3-foot-thick layer of clayey silts under recently placed and compacted fill that may be prone to soil settlement or differential settlement. Based on the findings of the geotechnical investigation, the settlement risk at the Project site presents a potentially significant hazard (Appendix F).

Collapsible soils consist of loose, dry, low-density materials that collapse and compact under the addition of water or excessive loading. These soils are distributed throughout the southwestern United States, specifically in areas of young alluvial fans, debris flow sediments, and loess (wind-blown sediment) deposits. Since collapsible soils occur in arid desert environments, it is not a concern for the Project site or more generally in Napa County.

Land Subsidence

Subsidence is the lowering of the land-surface elevation. The mechanism for subsidence is generally related to groundwater pumping and subsequent consolidation of loose aquifer sediments. The primary hazards associated with subsidence are increased flooding hazards and damage to underground utilities. Other effects of subsidence include changes in the gradients of stormwater and sanitary sewer drainage systems in which the flow is gravity-driven. As further discussed in Section 3.9, Hydrology and Water Quality, regional groundwater levels are reportedly stable. Furthermore, an extensive analysis of the groundwater basin associated with compliance with the 2014 Sustainable Groundwater Management Act found that land subsidence is not an issue in Napa County (LSCE 2016).

Seismic Hazards

Seismic hazards include surface rupture, ground shaking, liquefaction, lateral spreading, and landslides. These potential hazards are further described below.

Regional Seismicity

The Project site is located in the seismically active northern San Francisco Bay area. The main cause of seismic activity in the area results from the tectonic right-lateral strike-slip boundary of the North American plate and the Pacific plate. This boundary and area is named the San Andreas Fault Zone, which includes the San Andreas Fault, and numerous other active faults.

Numerous moderate and occasional large magnitude earthquakes have historically affected the Northern San Francisco Bay region. Notable earthquakes that have caused major damage to Napa County include the magnitude 7.9 California Earthquake of 1906 on the San Andreas fault and the 1969 Santa Rosa earthquakes on the Rodgers Creek fault. The 1906 and 1969 earthquakes were of moderate magnitude with earthquake epicenters located near downtown Santa Rosa. On August 24, 2014, the South Napa Earthquake, which consisted of a magnitude 6.0 earthquake along the West Napa Fault, caused strong to very strong ground shaking in the southern Napa region with significant damage, though it is estimated to have caused moderate perceived ground shaking in the City, with only light (non-structural) damage (USGS 2014). Prior to the South Napa Earthquake, the portion of the fault that ruptured in that quake was not widely known to be Holocene-active, nor was it zoned under the Alquist–Priolo Earthquake Fault Zoning Act. In addition to the San Andreas, Rodgers Creek, and West Napa faults, several other faults in the region, including the Green Valley and Rodgers Creek faults, are considered capable of generating moderate to large earthquakes.

Surface Rupture

Surface rupture occurs when the ground surface is broken and separates due to fault movement during an earthquake. Geologists commonly use the age of offset rocks as evidence of fault activity—the younger the displaced rocks, the more recently earthquakes have occurred. To evaluate the likelihood that a fault will produce an earthquake, geologists examine the magnitude and frequency of recorded earthquakes and evidence of past displacement along a fault. Under the Alquist-Priolo Earthquake Fault Zoning Act (AP Act), an *active* fault is defined by the State of California as a fault that has had surface displacement within Holocene time (last 11,000 years). Earthquake fault zones are designated by the California Geological Survey where concrete evidence (e.g., geologic offsets, geomorphic features, trench studies) demonstrates surface fault rupture has occurred within the past 11,000 years. A *potentially active* fault is a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years). Because the age of many potentially active faults are poorly constrained, and due to the sheer number of such faults in the state, the location and trace of both active and potentially active faults should be identified to examine potential for surface rupture.

The Project site is not crossed by an active earthquake fault zone designated under the AP Act, nor is it crossed by any potentially active fault mapped by the USGS or California Geological Survey (USGS and CGS 2019, DOC 2019). The closest earthquake fault zone designated under the AP Act is the Rodgers Creek Fault, located about 15 miles to the southwest of the Project site. In addition, the southern part of the West Napa Fault, located approximately 17 miles southeast of the Project site, was recently designated as an active fault zone, following the 2014 South Napa Earthquake. The northern segment of the West Napa Fault with evidence of displacement in Quaternary time, shown on Figure 3.6-1, is located approximately 1.2 miles

southwest of the Project site. However, there is no evidence of Holocene or late-Holocene movement on the northern branch of the West Napa Fault (City of St. Helena 2017). A Quaternary segment of the Green Valley Fault is located approximately 4 miles east of the Project site and the closest active portion of this fault is located approximately 17 miles southeast (USGS and CGS 2019).

Because the Project site is not crossed by an active or potentially active fault, it would not be affected by fault-related ground offset (i.e., primary fault rupture).

Ground Shaking

When an earthquake occurs along a fault, a characteristic way to measure its size is to measure the energy released during the event. When an earthquake occurs, a network of seismographs records the amplitude and frequency of the seismic waves it generates. The Richter Magnitude (M) for an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. Richter magnitudes vary logarithmically with each whole number step representing a 10-fold increase in the amplitude of the recorded seismic waves. While Richter Magnitude was historically the primary measure of earthquake magnitude, seismologists now use Moment Magnitude as the preferred way to measure earthquakes. The Moment Magnitude scale (Mw) is related to the physical characteristics of a fault, including the rigidity of the rock, the size of fault rupture, and the style of movement or displacement across the fault. Although the formulae of the scales are different, they both contain a similar continuum of magnitude values, except that Mw can reliably measure larger earthquakes and can do so from greater distances.

The third California earthquake rupture forecast by the "Working Group on California Earthquake Probabilities" cites a 72% chance that the greater San Francisco Bay Area will experience one or more earthquakes of M6.7 or larger at some point in the next 30 years (USGS 2015). Based on the number of active and potentially active faults in the North Bay, the Project site will likely be subject to an earthquake on near or distant faults producing moderate to strong perceived seismic ground shaking at least once over the course of a 30 year mortgage.

A primary tool that seismologists use to describe ground-shaking hazard is a probabilistic seismic hazard assessment (PSHA). The PSHA for the State of California takes into consideration the range of possible earthquake sources and estimates their characteristic magnitudes to generate a probability map for ground-shaking. The PSHA maps depict values of peak ground acceleration (PGA)[6] that have a 10% probability of being exceeded in 50 years (1

[6] The peak ground acceleration (PGA) for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. In terms of automobile accelerations, one "g" of acceleration is equivalent to the motion of a car traveling 328 feet from rest in 4.5 seconds.

in 475 chance). This probability level allows engineers to design buildings for ground motions that have a 90% chance of NOT occurring in the next 50 years, making buildings safer than if they were simply designed for the most likely events. Based on the PSHA, the Project site is expected to have a 10% probability of exceeding a PGA of 0.416g (very strong perceived shaking), and a 2% probability of exceeding a PGA of 0.633g (severe perceived shaking) in the next 50 years (DOC 2019; USGS 2014). A 2% probability of exceedance in 50 years is about the same as a 2,500-year average repeat time and is a design standard used for essential services buildings or highly vulnerable occupancies. For comparison purposes, the maximum PGA value recorded during the Loma Prieta earthquake was in the vicinity of the epicenter, near Santa Cruz, at 0.64g. During low-probability events, the PGAs expected at the site range from very strong to severe, resulting in moderate to heavy damage to structures and buildings.

Liquefaction and Lateral Spreading

Liquefaction is a temporary state of loose, saturated granular sediments from a solid state to a "liquefied" state as a result of ground shaking. In the process, the soil and sediment loses stability and cohesion, which causes ground displacement and structural failure of the ground. Localities most susceptible to liquefaction-induced damage are underlain by loose, water-saturated, granular sediment within 40 feet of the ground surface (DOC 2008). The California Geological Survey determines zones of required investigation for liquefaction based on liquefaction susceptibility (which consist of a combination of the character of sediment and highest recorded groundwater level) and liquefaction opportunity (which is based on the PSHA) (DOC 2008). Although the California Geological Survey has not mapped the Napa Valley for the purpose of designating zones of required investigation under the Seismic Hazards Mapping Act (see Section 3.6.3 for a description), the Project site may be subject to liquefaction based on the combination of soil and groundwater conditions potentially present on-site.

The Project site is mapped as having a moderate liquefaction susceptibility, based on the Quaternary geologic units described above (USGS 2006). Off-site, the active river channel deposits along the Napa River are mapped as having a very high liquefaction susceptibility (USGS 2006). The Project site's proximity to the Napa River means that groundwater levels on-site are likely to be relatively shallow. As discussed in Section 3.9, Hydrology and Water Quality, groundwater levels measured at the Stonebridge Well operated by the City have fluctuated between 18 and 25 feet between 2015 and 2018. Given the proximity and similar setting, groundwater levels are expected to be similar or possibly shallower beneath the Project site. According to the well completion report for the on-site well, the static water level was recorded as being 11 feet bgs in 1992 (DWR 1992). Given these factors, there is a potentially significant risk for liquefaction at the Project site.

Lateral spreading, which is the horizontal displacement of soil toward an open channel or free face, such as an excavation boundary, is not considered to be a significant concern on-site because the site is flat and the only slope immediately adjacent to the Project site is the levee along the Napa River. Based on the Proposed Project's grading plan, the portion of the levee adjacent to the Project site is roughly 8–10 feet high with slopes 4:1 (horizontal:vertical). Since the levee was constructed in 2010 in accordance with U.S. Army Corps of Engineers and Department of Water Resources standards, it is designed to avoid saturation under normal conditions, and meet earthwork standards necessary to avoid seismic damage. Under very specific conditions, the banks of the Napa River may experience lateral spread in a strong earthquake; however, such an occurrence would not affect the Project site, since earth displacements from lateral spread would be into the river channel, not the Project site.

Seismically Induced Landslides

Because the Proposed Project is on flat to nearly flat land, there is no appreciable risk of seismically induced landslide. In the event an earthquake results in off-site slope instabilities, such as along the levee or on the southern bank of the Napa River (e.g., through lateral spread or shallow soil slumps), the impact would be highly localized to the base of the slope, and would not place the Project site or its residents at risk.

3.6.3 Regulatory Setting

Federal Regulations

The following federal regulations pertaining to geology and soils would apply to the Proposed Project.

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction activities. The Occupational Safety and Health Administration's Excavation and Trenching standard, Title 29 of the Code of Federal Regulations, Part 1926.650, covers requirements for excavation and trenching operations. The Occupational Safety and Health Administration requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

State Regulations

The statewide minimum public safety standard for mitigation of earthquake hazards (as established through the California Building Code [CBC], AP Act, and the Seismic Hazards Mapping Act) is that the minimum level of mitigation for a project should reduce the risk of

ground failure during an earthquake to a level that does not cause the collapse of buildings for human occupancy, but in most cases, is not required to prevent or avoid the ground failure itself. It is not feasible to design all structures to completely avoid damage in worst-case earthquake scenarios. Accordingly, regulatory agencies have generally defined an "acceptable level" of risk as that which provides reasonable protection of the public safety, although it does not necessarily ensure continued structural integrity and functionality of a project (14 CCR 3721(a)). Nothing in these acts, however, precludes lead agencies from enacting more stringent requirements, requiring a higher level of performance, or applying these requirements to developments other than those that meet the acts' definitions of "project."

Alquist–Priolo Earthquake Fault Zoning Act

The AP Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the state geologist established regulatory zones, called "earthquake fault zones," around the surface traces of active faults and has published maps showing these zones. Earthquake fault zones are designated by the California Geological Survey and are delineated along traces of faults where mapping demonstrates surface fault rupture has occurred within the past 11,000 years. Construction within these zones cannot be permitted until a geologic investigation has been conducted to prove that a building planned for human occupancy will not be constructed across an active fault. These types of site evaluations address the precise location and recency of rupture along traces of the faults and are typically based on observations made in trenches excavated across fault traces.

The Proposed Project is not within an Alquist–Priolo Earthquake Fault Zone and therefore is not subject to the requirements of the AP Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Section 2690–2699.6) directs the California Department of Conservation to protect the public from earthquake-induced liquefaction and landslide hazards (note that these hazards are distinct from fault surface rupture hazard regulated by the AP Act of 1972). This act requires the state geologist to delineate various seismic hazard zones, and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones (i.e., zones of required investigation). Before a development permit may be granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. Evaluation and mitigation of potential risks from seismic hazards within zones of required investigation must be conducted in accordance with the California Geological Survey, Special Publication 117A, adopted March 13, 1997, by the State Mining and Geology Board as updated in 2008 (DOC 2008).

To date, Seismic Hazard Zone Maps have been prepared for portions of Southern California and the San Francisco Bay Area; however, no seismic hazard zones have yet been delineated for the City including the Proposed Project area (i.e., the Saint Helena USGS 7.5' Quadrangle). As a result, the provisions of the Seismic Hazards Mapping Act would not apply to the Proposed Project.

California Building Code

The CBC has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 to be enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction.

The 2019 edition of the CBC is based on the 2015 International Building Code published by the International Code Conference. The 2019 CBC contains California amendments based on the American Society of Civil Engineers Minimum Design Standards 7-16, which provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site, and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

Paleontological Resources

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state laws and regulations, namely California Public Resources Code Section 21000 et seq. and Public Resources Code Section 5097.5. Paleontological resources are explicitly afforded protection by the California Environmental Quality Act (CEQA), specifically in Section VII(f) of CEQA Guidelines Appendix G, the Environmental Checklist Form, which addresses the potential for adverse impacts to “unique paleontological resource[s] or site[s] or . . . unique geological feature[s]” (14 CCR 15000

et seq.). This provision covers fossils of signal importance—remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group—as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Further, CEQA provides that, generally, a resource shall be considered "historically significant" if it has yielded or may be likely to yield information important in prehistory (14 CCR 15064.5 [a][3][D]). Paleontological resources would fall within this category. The California Public Resources Code, Chapter 1.7, Sections 5097.5 and 30244, also regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.

Local Regulations

Local regulations relevant to geology, soils, and seismicity are discussed below.

City of St. Helena 1993 General Plan

The following goals, objectives, and policies from the City of St. Helena 1993 General Plan, Public Health and Safety element are relevant to geology, soils, and seismicity issues in the Project site.

> **Policy 8.4.1:** Restrict the intensity of development and the level of land form alteration in the hillside areas in order to minimize the potential for slope failure.
>
> **Implementing Policy 8.4.2**: Require a soils and geologic report to be submitted for new construction prior to the issuance of grading and building permits and the submission of final maps.
>
> **Implementing Policy 8.4.3**: Prohibit any development—including any land alteration, grading for roads and structural development—in areas of slope instability or other geologic concerns until mitigating measures are taken to limit potential damage to levels of acceptable risk.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The following policies from the City of St. Helena 2019 General Plan, Public Health and Safety element are relevant to geology, soils, and seismicity issues in the Project site.

> **Policy PS3.1:** Minimize risk of injury, loss of life and property damage from seismically induced and other known geologic hazards.
>
> **Policy PS3.2**: Restrict the intensity of development and the level of landform alteration in the hillside areas in order to minimize the potential for slope failure

Policy PS3.3: The required soils and geologic reports for new development shall include geotechnical analysis for construction in areas with potential geological hazards and/or for purposes of environmental analysis. The analysis shall investigate all potential geo-hazard issues for the site where there is substantial evidence of a potential risk.

Policy PS3.4: Geologic reports for new development shall describe hazards and include mitigation measures to reduce risks to acceptable levels. Where appropriate, an engineer's or geologist's certification shall be required stating that risks have been mitigated to an acceptable level.

3.6.4 Impacts

Methods of Analysis

Impacts with respect to geology, soils and seismicity are assessed by comparing conditions expected under implementation of the Proposed Project to the existing environmental setting described in Section 3.6.2. The California Supreme Court has recently confirmed that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents." However, an agency must "evaluate existing conditions in order to assess whether a project could exacerbate hazards that are already present." The analysis evaluates if the Proposed Project would directly or indirectly place people, structures, or the general public at increased exposure to health and/or safety risks associated with soil, geologic or seismic hazards.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction;
    - Landslides.
- Result in substantial soil erosion or the loss of topsoil.

- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Threshold Criteria not Applicable to the Proposed Project

Due to the location and characteristics of the Proposed Project, certain significance criteria are not applicable and therefore, are not considered potential impacts. These criteria are addressed briefly below and are not discussed further in this document.

Fault Rupture

As discussed in Section 3.6.2, Environmental Setting, the Proposed Project is not located within a fault rupture hazard zone. This includes both earthquake fault zones designated under the AP Act, as well as potentially active faults of Quaternary age. Because the Project site is not crossed by any known active or potentially active fault, there would be no impact and this issue (first significance threshold listed above) is not further addressed.

Landslides

As discussed in Section 3.6.2, Environmental Setting, the Proposed Project is not at risk of landslides because it is nearly flat, and because there are no substantial slopes or hillside areas in the immediate vicinity. Therefore, there would be no impact and this issue (first significance threshold listed above) is not further addressed.

Soil Erosion and Loss of Topsoil

Potential impacts of erosion on water quality are discussed in Section 3.9, Hydrology and Water Quality and impacts with regard to agricultural resources (e.g., prime soils) are addressed in Section 3.2, Agriculture and Forestry Resources. In the context of this section, a substantial impact would occur if accelerated and significant soil erosion were to be sufficient in magnitude to undermine structures or compromise slope stability. Examples of this style of erosion are rills (small narrow channel) and gullies, whereby storm runoff produces deep incisions into the soils and slopes. Because the Project site is on flat land, and would be developed into a residential

subdivision, there is no reasonable potential for any rills and/or gullies to develop. Runoff would be managed and discharged into an existing detention basin, as described in more detail in Section 3.9. Therefore, this issue (second significance threshold listed above) is not applicable to the Proposed Project and is not further addressed.

Alternative Wastewater Systems

The Proposed Project would connect to the City's sewer system to provide conveyance of wastewater to the treatment plant. Therefore, this issue (fifth significance threshold listed above) is not applicable to the Proposed Project and is not further addressed.

Unique Geologic Features

The Project site is undeveloped and has been disturbed due to the placement of fill associated with the City's Flood Control Project. The Project site does not contain any unique geologic features, such as a landform or rock outcrop of scientific, cultural or aesthetic interest. Therefore, implementation of the Proposed Project would not directly or indirectly destroy a unique geologic feature. Therefore, there would be no impact and this issue (last significance threshold listed above) is not further addressed.

Impacts and Mitigation Measures

3.6-1: Would the Proposed Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or liquefaction? This impact would be potentially significant.

Seismic ground shaking is an unavoidable hazard for nearly all man-made facilities (buildings and structures) in the region. The geologic setting means proposed facilities are likely to experience ground shaking from at least one major earthquake (e.g., greater than moment magnitude 6.7) sometime during the operational life of a project. Based on the most recent PSHA for the State of California, the Project site would have an approximately 10% chance of exceeding a PGA of 0.416g, and a 2% probability of exceeding a PGA of 0.633g in the next 50 years (DOC 2019). These levels of ground shaking, while relatively improbable, are very strong to severe, and capable of producing extensive non-structural damage and limited structural damage in buildings at the site. The amount of ground shaking that actually occurs depends on the magnitude of the earthquake, the distance from the epicenter, and the type of earth materials between the receptor and the epicenter. The Project site is also underlain by soils that if not properly engineered during construction site preparation, could be subject to secondary effects such as seismically induced liquefaction, differential settlement or compression.

If future development of the site is not constructed in a manner that protects residents from geologic and seismic hazards, the Proposed Project could have a significant impact. However,

the 1993 General Plan policies implemented by the City require that any geologic or seismic risks be mitigated to an acceptable level as a condition of project approval (Implementing Policy 8.4.3). These General Plan policies (listed in Section 3.6.3) are enforced as part of the tentative subdivision map submittal process, as described under Municipal Code Section 16.32.220 (Soils Investigation and Geotechnical Report Requirements). Furthermore, Municipal Code Chapter 15 (Building and Construction) incorporates the CBC and thus enforces the structural design requirements associated with seismic loads. As part of this process, a design-level geotechnical investigation would be completed (in addition to the existing geotechnical investigation already completed) to assess site conditions at a greater level of detail and make geotechnical recommendations to be incorporated into the site development plan, grading plan and building plan. The City requires that such geotechnical recommendations be verified at time of grading and building construction prior to issuance of a certificate of occupancy.

The initial geotechnical work completed for the Proposed Project by Miller Pacific Engineering Group (Appendix F) identifies a potential issue associated with soft soils occurring under a layer of compacted fills. Specifically, it notes the following (Appendix F):

> It is not acceptable to place compacted, engineered fill (designed to support future development) on the Hunter Parcel without first over excavating and recompacting the existing weak surface layer, due to the anticipated settlement of the weak soil layer as a result of the loads imposed by the new fill, as well as future building loads. Settlement of the weak soil layer, if left in place beneath the recently placed compacted fill, could lead to damage to new residential structures, streets, utilities, and concrete flatwork supported over the weak soil layer.

It is this observation that leads to the recommendation to over excavate to an average depth of 4.5 feet (and up to 10 feet in the location of the former pond). Furthermore, the Project site has the potential to be subject to seismically induced liquefaction and/or differential settlement, as discussed in the environmental setting. Because the geotechnical borings completed on-site in 2009 lacks coverage in the southern portion of the site (see Figure 3.6-1), and it occurred prior to fill placement from the Flood Protection Project, the data may no longer adequately represent shallow soil conditions. Because of this, and due to the potential for liquefaction and/or settlement of weak soils, the Proposed Project could potentially expose residences to significant impacts from a major earthquake. This is considered a **potentially significant impact.**

Mitigation Measures

Implementation of Mitigation Measure GEO-1 would ensure design-level geotechnical reports have the appropriate scope and include recommendations necessary to mitigate potential seismic hazards to a less-than-significant level. Implementation of Mitigation Measure GEO-1

expands upon the typical steps completed as part of standard building and grading permit approvals in order to ensure the identified impacts (i.e., weak/compressible soils and liquefaction risk) are mitigated. In particular, the requirement to comply with the California Department of Conservation Special Publication 117A (Guidelines for Evaluating and Mitigating Seismic Hazards in California) ensures that the site is treated in the same way as if it were designated as a zone of required investigation for liquefaction under the Seismic Hazards Mapping Act.

GEO-1: Prior to the issuance of any site-specific grading or building permits, the Project applicant shall have a design-level geotechnical report prepared and submitted to the City of St. Helena Building Department for review and approval in accordance with adopted City standards. The structural designs shall adhere to the currently adopted version of the California Building Code. The report shall identify specific site preparation methods, grading practices, foundation designs, and other recommendations appropriate for minimizing damage from weak soils, expansive soils, differential settlement, and seismic hazards, including liquefaction. Specifically, the following requirements for the geotechnical and soils report shall be met:

- Analysis presented in the geotechnical report shall conduct a detailed evaluation of liquefaction in accordance with California Department of Conservation Special Publication 117A: *Guidelines for Evaluating and Mitigating Seismic Hazards in California*.
- Additional subsurface soil borings shall be completed as necessary to represent the full range of site conditions, including the southern portion of the parcel mapped as alluvial fan.
- Analysis presented in the geotechnical report shall include recommendations for building foundations and improvements, including sidewalks, parking lots, and subsurface utilities, that take into consideration the potential effects of settlement, collapse, and expansive or corrosive soils. This includes the recommendation to over excavate to an average depth of 4.5 feet (and up to 10 feet in the location of the former pond) due to anticipated settlement.
- All design criteria and specifications set forth in the design-level geotechnical report shall be implemented as a condition of project approval. This report shall be completed as a condition of approval of the final tentative map.

3.6-2: Would implementation of the Proposed Project occur on weak, compressible, and/or expansive soils that could result in adverse impacts on habitable structures? This impact is potentially significant.

Construction on un-compacted and loose fill, if present, would be subject to varying rates of settlement. If the settlement is not uniform, or if collapse occurs, structural damage may result. Underground utilities may also experience differential settlement along their alignments. The preliminary geotechnical report prepared for the Proposed Project indicated that engineered fill was placed on top of a 3-foot layer of soft, weak natural soil with high moisture content across the Project site, and above uncompacted fill in a former pond area. These unconsolidated fills and soils with high moisture content were deemed unsuitable for supporting future development. Over-excavation, moisture-conditioning, and recompaction of the recent fill and the underlying weak soils was recommended to avoid future settlement after development. It is anticipated that placement of engineered fill for use as structural building pads, roads, and within utility trenches (including) over excavation and recompaction would remove and/or otherwise address the preexisting potential for expansive or corrosive soils. Therefore, compliance with standard conditions of approval, which include standard site preparation practices and compliance with ASTM standards during grading would reduce the potential impacts of expansive or corrosive soils to a less-than-significant level. However, because the Project site includes weak compressible soils which could result in structural damage, this is a **potentially significant impact**.

Mitigation Measures

Implementation of Mitigation Measure GEO-1 would ensure a design-level geotechnical report be prepared that would address any weak/compressible soils. The Proposed Project is required to comply with the California Department of Conservation Special Publication 117A (Guidelines for Evaluating and Mitigating Seismic Hazards in California) which ensures that unstable soils would be addressed and the impact would be less than significant. Compliance with Mitigation Measure GEO-1 mitigates this impact and no additional mitigation is necessary.

3.6-3: Would implementation of the Proposed Project directly or indirectly destroy a unique paleontological resource or site? This impact would be potentially significant.

Future development of the Proposed Project could result in direct or indirect impacts on paleontological resources. As described in the setting, there are no records of fossil finds within the City, and the Holocene alluvium mapped at the surface has a low potential for paleontological resources. However, there is a slight chance deeper excavations on-site for underground utilities, for example, could encounter Pleistocene age alluvium with the potential for fossils. Excavation for building foundations utilities and streets is expected to be on average 4.5 feet bgs, except up to 10 feet bgs in the area of the former pond, shown in Figure 3.6-1.

Although the thickness of Holocene age alluvium is likely to exceed the maximum excavation depths on the Project site, the boundary between Holocene and Pleistocene alluvium has not been confirmed. Therefore, destruction of a unique fossil is a **potentially significant impact.**

Mitigation Measures

In the event any paleontological resources are uncovered during site disturbance Mitigation Measure GEO-2 outlines the steps to follow. Compliance with this measure would ensure impacts are reduced to less than significant.

GEO-2: In the event that known or suspected paleontological resources (e.g., fossils) are unearthed during grading or trenching, the area of discovery shall be roped off by the construction contractor to include a 50-foot radius buffer and remain off-limits until cleared by a qualified paleontologist. The Project applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines, who shall be tasked with assessing the significance of the fossil find, including documenting the nature, location, and taxa of the find. The qualified paleontologist shall use his/her professional judgement as to the significance of the find, and whether the find should be preserved in a museum repository. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. Documentation of the fossil find, including appropriate salvage and recovery of fossil specimens and of transfer of to an appropriate repository (e.g., University of California Museum of Paleontology) shall be submitted to the City of St. Helena as evidence of compliance with this mitigation measure.

3.6.5 Cumulative Impacts

The geographic scope for the analysis of cumulative geologic and soils-related impacts consists of the Project site, as these impacts depend on the site-specific conditions and features on the Project site, such as soil composition and topography. These site-specific impacts would not combine to create cumulative impacts with other projects occurring elsewhere in the City. Therefore, the Proposed Project would not have the potential to contribute to an existing cumulative impact.

The geographic scope for the analysis of cumulative paleontological impacts consists of development slated to occur within the City or Napa County on Pleistocene age alluvium. Cumulative impacts on paleontological resources consider whether the impacts of the Proposed Project together with other related projects substantially diminish the number of paleontological resources within the same or similar context or property type.

3.6-4: Would the Proposed Project contribute to cumulative impacts related to loss of paleontological resources? This would be a less than considerable contribution.

As discussed under Impact 3.6-3, the chance of encountering paleontological resources at the site is considered low because there are no records of fossil finds within the City, and the Holocene alluvium mapped at the surface has a low potential for paleontological resources. However, there is a slight chance deeper excavations on-site for underground utilities could encounter Pleistocene age alluvium with the potential for fossils. It is possible that construction of the Proposed Project in combination with other cumulative projects in undeveloped areas in the City and County underlain by Pleistocene age alluvium could disturb multiple unknown unique paleontological resources, although unlikely to occur. Due to the size of the Project site and the low likelihood of unearthing any fossils, the Proposed Project's contribution would not be considerable resulting in a less-than-significant incremental contribution.

Mitigation Measures

None required.

3.6.6 References

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3.7 GREENHOUSE GAS EMISSIONS

3.7.1 Introduction

This section presents potential impacts regarding greenhouse gas (GHG) emissions of the proposed Hunter Subdivision Project (Proposed Project) and includes the environmental setting, regulatory framework, and impacts of the Proposed Project on the environment. The analysis and findings are based on the emissions modeling, which can be found in Appendix C.

Comments received in response to the Notice of Preparation included concerns regarding the number of trees that would be planted to accommodate for the increase in GHG emissions and a comment regarding the need for the Proposed Project to develop bicycle and pedestrian infrastructure to provide alternative transportation methods within the community. A copy of the Notice of Preparation and comments received is included in Appendix A.

Information contained in this section is based on Proposed Project plans, the California Emissions Estimator Model (CalEEMod) (used to estimate Proposed Project emissions), the Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act Air Quality Guidelines (BAAQMD 2017), the California Air Resources Board (CARB) Climate Change Scoping Plan (CARB 2008) and The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target (CARB 2017a), and the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission Plan Bay Area: Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area 2017–2040 (Plan Bay Area) (ABAG and MTC 2017). Other sources consulted are listed in Section 3.7.6, References.

3.7.2 Environmental Setting

Climate Change Overview

Climate change refers to any significant change in measures of Earth's climate, such as temperature, precipitation, and wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human-caused, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process, as follows: Short-wave radiation emitted by the sun is absorbed by the Earth, the Earth

emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales, and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-20th century and is the most significant driver of observed climate change (EPA 2017a; IPCC 2013). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system.

Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) (see also California Environmental Quality Act [CEQA] Guidelines Section 15364.5).[1] Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities.[2]

[1] Climate-forcing substances include GHGs and other substances such as black carbon and aerosols. This discussion focuses on the seven GHGs identified in California Health and Safety Code Section 38505, so impacts associated with other climate-forcing substances are not evaluated herein.

[2] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change's (IPCC) Second Assessment Report (1995), IPCC's Fourth Assessment Report (2007), California Air Resources Board's "Glossary of Terms Used in GHG Inventories" (CARB 2017b), and U.S. Environmental Protection Agency's "Glossary of Climate Change Terms" (EPA 2016).

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are the combustion of fuels such as coal, oil, natural gas, and wood, and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (such as in rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases are synthetic, powerful GHGs that are emitted from a variety of industrial processes. Several prevalent fluorinated gases include the following:

- *Hydrofluorocarbons*: HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals that are used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- *Hydrochlorofluorocarbons*: HCFCs are compounds containing hydrogen, fluorine, chlorine, and carbon atoms. HFCs are synthetic chemicals that are used as alternatives to ozone depleting substances (chlorofluorocarbons).
- *Perfluorocarbons*: PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, along with HFCs, to the ozone depleting substances. The two main sources of PFCs are primarily aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- *Sulfur Hexafluoride*: SF_6 is a colorless gas that is soluble in alcohol and ether and slightly soluble in water. SF6 is used for insulation in electric power transmission and

distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.

Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo [i.e., the reflection of radiation]) (EPA 2016). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of carbon dioxide equivalent (CO_2e).

The current version of CalEEMod (Version 2016.3.2; CAPCOA 2017) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the Intergovernmental Panel on Climate Change's Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Proposed Project.

Sources of GHG Emissions

Global Inventory

Anthropogenic GHG emissions worldwide in 2017 (the most recent year for which data is available) totaled approximately 50,860 million metric tons (MMT) of CO_2e, excluding land use change and forestry (PBL 2018). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, or approximately 33,290 MMT CO_2e (PBL 2018). Table 3.7-1 presents the top GHG emissions–producing countries.

Table 3.7-1
Top Six Greenhouse Gas–Producing Countries and the European Union

Emitting Countries (listed in order of emissions)	GHG Emissions (MMT CO_2e)
China	13,530
United States	6,640
European Union	4,560

Table 3.7-1
Top Six Greenhouse Gas–Producing Countries and the European Union

Emitting Countries (listed in order of emissions)	GHG Emissions (MMT CO_2e)
India	3,650
Russian Federation	2,220
Japan	1,490
Brazil	1,200
Total	33,290

Source: PBL 2018.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.

National and State Inventories

Per the U.S. Environmental Protection Agency's (EPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018, total U.S. GHG emissions were approximately 6,676.6 MMT CO_2e in 2018. The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81.3% of total GHG emissions (5,428.1 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8% of CO_2 emissions in 2018 (5,031.8 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2018 are higher by 3.7%, down from a high of 15.2% above 1990 levels in 2007. GHG emissions decreased from 2017 to 2018 by 2.9% (188.4 MMT CO_2e) and overall, net emissions in 2018 were 10% below 2005 levels (EPA 2020).

According to California's 2000–2017 GHG emissions inventory (2019 edition), California emitted 424.1 MMT CO_2e in 2017, including emissions resulting from out-of-state electrical generation (CARB 2019). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high GWP substances, and recycling and waste. The California GHG emissions source categories (as defined in CARB's 2008 Climate Change Scoping Plan: A Framework for Change [Scoping Plan]) (CARB 2008) and their relative contributions in 2017 are presented in Table 3.7-2.

Table 3.7-2
Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[1]
Transportation	169.86	40%
Industrial uses	89.40	21%
Electricity (in state)	38.45	9%
Electricity (imports)	23.94	6%
Agriculture	32.42	8%
Residential	26.00	6%

Table 3.7-2
Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[1]
Commercial	15.14	4%
High GWP substances	19.99	5%
Recycling and waste	8.89	2%
Totals	429.40	100%

Source: CARB 2019.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent; GWP = global warming potential. Emissions reflect 2016 California GHG inventory.
[1] Percentage of total has been rounded and total may not sum due to rounding.

Between 2000 and 2017, per-capita GHG emissions in California have dropped from a peak of 14.1 MT per person in 2001 to 14.1 MT per person in 2017, representing a 24% decrease. In addition, total GHG emissions in 2017 were approximately 5 MMT CO_2e less than 2016 emissions. The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California is just below the 2020 target of 431 MMT CO_2e (CARB 2019).

Local Inventory

Total GHG emissions for the City of St. Helena (City) in 2018 were estimated at approximately 76,012 MT CO_2e (City of St. Helena 2018). As shown in Table 3.7-3, transportation emissions constituted 59% of the GHG emissions while electricity and natural gas use from the commercial/industrial sectors and residential sector accounts for 17% and 13%, respectively. Other sources including solid waste, off-road transportation equipment, wastewater treatment, water conveyance, public lighting, and agriculture account for the remaining 11% (St. Helena 2018).

Table 3.7-3
Greenhouse Gas Emissions Sources in St. Helena

Source Category	Annual GHG Emissions (MT CO_2e)	Percent of Total
Residential uses	9,890	13.0%
Commercial and industrial uses	12,773	16.8%
Transportation	44,531	58.6%
Solid waste	3,734	4.9%
Water transport, distribution, and treatment	138	0.2%
Wastewater	181	0.2%
Off-road equipment	4,631	6.1%
Public lighting	37	>0.1%
Agriculture	97	0.1%
Totals	76,012	100%

Source: St. Helena 2018.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 Intergovernmental Panel on Climate Change Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, rising sea levels, and ocean acidification (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a 0.2°C (0.36°F) rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of approximately 0.2°C per decade is projected, and there are identifiable signs that global warming could be taking place.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights. Shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year. Sea levels have risen, and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

Model projections for precipitation over California continue to show the Mediterranean pattern of wet winters and dry summers, with seasonal, year-to-year, and decade-to-decade variability. For the first time, however, several of the improved climate models shift toward drier conditions by the mid- to late 21st century in central, and most notably, Southern California. By the late century, all projections show drying, and half of them suggest that 30-year average precipitation will decline by more than 10% below the historical average (CCCC 2012).

A summary of current and future climate change impacts to resource areas in California, as discussed in the Safeguarding California: Reducing Climate Risk (CNRA 2014), is provided below.

Agriculture. Some of the specific challenges faced by the agricultural sector and farmers include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding to extreme drought, to destructive storm events; significant shifts in

water availably and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production.

Biodiversity and Habitat. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shift and novel combinations of species; pathogens, parasites and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; threshold effects (i.e., a change in the ecosystem that results in a "tipping point" beyond which irreversible damage or loss has occurs).

Energy. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events and sea level rise.

Forestry. The most significant climate change related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large-scale mortalities and combined with increasing temperatures have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts and vegetation conversions.

Ocean and Coastal Ecosystems and Resources. Sea level rise, changing ocean conditions and other climate change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems in addition to threatening people and infrastructure located along the California coastline and in coastal communities. Sea level rise in addition to more frequent and severe coastal storms and erosion are threatening vital infrastructure such as roads, bridges, power plants, ports and airports, gasoline pipes, and emergency facilities as well as negatively impacting the coastal recreational assets such as beaches and tidal wetlands.

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the twenty-first Century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies, and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity and duration of extreme heat and heat waves are likely to increase the risk of mortality due to heat related illness as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness such as asthma and allergies.

Transportation. While the transportation industry is a source of GHG emissions it is also vulnerable to climate change risks. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause the road surfaces to expand which

leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of peoples and goods, or potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion risks, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during the winter months. Increased risk of flooding has a variety of public health concerns including water quality, public safety, property damage, displacement and post-disaster mental health problems. Prolonged and intensified droughts can also negatively groundwater reserves and result in increased overdraft and subsidence. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality.

In March 2016, the California Natural Resources Agency (CNRA) released Safeguarding California: Implementation Action Plans, a document that shows how California is acting to convert the recommendations contained in the 2014 Safeguarding California plan into action (CNRA 2016). Additionally, the CNRA released Safeguarding California Plan: 2018 Update in January 2018, which provides a roadmap for state agencies to protect communities, infrastructure, services, and the natural environment from climate change impacts. The 2018 Safeguarding California Plan includes 69 recommendations across 11 sectors and more than 1,000 ongoing actions and next steps developed by scientific and policy experts across 38 state agencies (CNRA 2018). As with previous state adaptation plans, the 2018 Update addresses the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming.

3.7.3 Regulatory Setting

Federal Regulations

Massachusetts v. EPA

In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether

the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel by 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and directs the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 by model year 2025 on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks (EPA 2017b).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6%–23% over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of phase two of the program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model years 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

In August 2018, EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2%–3% of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of one degree Celsius by 2100 (EPA and NHTSA 2018). California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. Thus, the timing and consequences of the 2018 federal proposal are speculative at this time.

On September 27, 2019, EPA and NHTSA published the “Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program” (84 FR 51,310), which became effective November 26, 2019. The Part One Rule revokes California’s authority to set its own

GHG emissions standards and set zero-emission vehicle mandates in California (EPA and NHTSA 2019). The Part One Rule impacts some of the underlying assumptions in the CARB EMFAC2014 and EMFAC2017 models for criteria air pollutant emissions from gasoline light-duty vehicles, which CARB released off-model adjustment factors for on November 20, 2019, primarily for use in federal Clean Air Act conformity demonstration analyses. California expects Part Two of these regulations to be adopted later in the fall of 2019. Because CARB does not know the full impacts of these rules until Part Two is released, no off-model adjustments factors are available for GHG emissions at this time. In addition, the EMFAC off-model adjustments have not yet been incorporated into CalEEMod. This issue is evolving as California and 22 other states, as well as the District of Columbia and two cities, filed suit against the EPA over the vehicle waiver revocation on November 15, 2019 and a petition for reconsideration of the rule was filed on November 26, 2019, by California and 22 other states, the District of Columbia, and four cities.

State Regulations

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, Assembly Bills (ABs), Senate Bills (SBs), and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

EO S-3-05. EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, GHG emissions should be reduced to 1990 levels by 2020, and GHG emissions should be reduced to 80% below 1990 levels by 2050.

AB 32. In furtherance of the goals established in EO S-3-05, the legislature enacted AB 32. The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive multi-year program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

CARB's 2007 Statewide Limit. In 2007, in accordance with California Health and Safety Code, Section 38550, CARB approved a statewide limit on the GHG emissions level for 2020 consistent with the determined 1990 baseline (427 MMT CO_2e).

CARB's Climate Change Scoping Plan. In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emissions limitation, emissions reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for 2020, consistent with the determined 1990 baseline (427 MMT CO_2e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan) in accordance with Health and Safety Code Section 38561. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan are the following (CARB 2008):

- Expanding and strengthening existing energy efficiency programs and building and appliance standards.
- Achieving a statewide renewable energy mix of 33%.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions.
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation.

In the Scoping Plan, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020 absent GHG-reducing laws and regulations, referred to as "business-as-usual"). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, that no further regulatory action would impact vehicle fuel efficiency, and that building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the Scoping Plan's Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the business-as-usual conditions (CARB 2011a). When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (RPS) (12% to 20%) (CPUC 2015), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the business-as-usual conditions.

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050" (CARB 2014). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050" (CARB 2014). Those six areas are energy, transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure), agriculture, water, waste management, natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

CARB's research efforts presented in the First Update indicate that it has a "strong sense of the mix of technologies needed to reduce emissions through 2050" (CARB 2014). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the Intergovernmental Panel on Climate Change. Using the recalculated 1990 emissions level (431 MMT CO_2e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement (CARB 2011a), CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the business-as-usual conditions (CARB 2014).

On January 20, 2017, CARB released its 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017a). This update presents CARB's strategy for achieving the state's 2030 GHG target as established in SB 32 (discussed below), including continuing the Cap-and-Trade Program through 2030, and includes a new approach to reduce GHGs from refineries by 20%. The Second Update incorporates approaches to cutting short-lived climate pollutants under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), acknowledges the need for reducing emissions in agriculture, and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon. During development of the Second Update, CARB held a number of public workshops in the natural and working lands, agriculture, energy, and transportation sectors to inform development of the 2030 Scoping Plan Update (CARB 2016). When discussing project-level GHG emissions reduction actions and thresholds, the Second Update states, "achieving no net increase in GHG emissions is the correct overall objective, but it may not be appropriate or feasible for every development project. An inability to mitigate a project's GHG emissions to zero does not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA" (CARB 2017a). The Second Update was approved by CARB's Governing Board on December 14, 2017.

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050, as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

SB 32 and AB 197. SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction targets, make changes to CARB's membership, increase legislative oversight of CARB's climate-change-based activities, and expand dissemination of GHG and other air-quality-related emissions data to enhance transparency and accountability. More

specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

SB 605 and SB 1383. SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state, and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon) and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy (SLCP Reduction Strategy) in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH_4, and fluorinated gases.

EO B-55-18. EO B-55-18 (September 2018) establishes a statewide policy for the state to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. The goal is an addition to the existing statewide targets of reducing the state's GHG emissions. CARB will work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code [PRC] Section 25402(b)(1)). The regulations receive input from members of industry and the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (PRC Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility

(PRC Section 25402(d)) and cost effectiveness (PRC Sections 25402(b)(2) and (b)(3)). These standards are updated to consider and incorporate new energy-efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The current Title 24 standards are the 2019 Title 24 Building Energy Efficiency Standards, which became effective on January 1, 2020. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards would use approximately 53% less energy than those under the 2016 standards (CEC 2018). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards due mainly to lighting upgrades (CEC 2018).

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as California's Green Building Standards (CALGreen), and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2019 standards, which are the current standards, became effective January 1, 2020.

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for

appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

SB 1. SB 1 (2006) established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the Public Resources Code, including Chapter 8.8, California Solar Initiative, that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry in which solar energy systems are a viable mainstream option for homes and businesses within 10 years of adoption, and to place solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed “GoSolarCalifornia,” was previously titled “Million Solar Roofs.”

AB 1470. This bill established the Solar Water Heating and Efficiency Act of 2007. The bill made findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies to reduce natural gas demand. The bill defined several terms for purposes of the act. The bill required the CEC to evaluate the data available from a specified pilot program, and, if it made a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting to reduce electricity consumption by 50% for indoor residential lighting and by 25% for indoor commercial lighting.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (2002) established the RPS program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010.

SB 1368. SB 1368 (2006) requires the CEC to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

SB X1 2. SB X1 2 (2011) expanded the RPS by establishing that 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350. SB 350 (2015) further expanded the RPS by establishing that 50% of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100. SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030 be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the State that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Mobile Sources

AB 1493. In a response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. In 2009–2012, standards resulted in a reduction of approximately 22% in GHG emissions compared to emissions from the 2002 fleet, and in 2013–2016, standards resulted in a reduction of approximately 30%.

EO S-1-07. Issued on January 18, 2007, EO S-1-07 sets a declining low-carbon fuel standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the low-carbon fuel standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. Carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

SB 375. SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional Metropolitan Planning Organizations are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan. The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a Metropolitan Planning Organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not regulate the use of land; supersede the land use authority of cities and counties; or require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

On September 23, 2010, CARB adopted the SB 375 targets for the regional Metropolitan Planning Organizations. CARB set a target of 7% per capita reduction by 2020 and a 15% per capita reduction by 2035 for the Bay Area. The ABAG and the Metropolitan Transportation Commission, which is the Metropolitan Planning Organization for the Bay Area, adopted the Plan Bay Area in July 2017 (ABAG and MTC 2017). The Plan Bay Area is a long-range plan for transportation projects within the planning area and established 13 performance targets to achieve the following goals/outcomes: Climate Protection, Adequate Housing, Healthy and Safe Communities, Open Space and Agricultural Preservation, Equitable Access, Economic Vitality, and Transportation System Effectiveness. Two of these targets are mandatory to comply with SB 375, and the Plan Bay Area exceeds the 15% reduction per capita in GHG emissions from light-trucks and cars by 2035 (Climate Protection Goal), and plans to house 100% of the region's projected growth (from a 2010 baseline year) by income level without displacing current low-income residents and with no increase in in-commuters (Adequate Housing Goal).

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single, coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2011b). To improve air quality, CARB implemented new emission standards to reduce smog-forming emissions beginning with 2015 model-year vehicles. It is estimated that by 2025, cars will emit 75% less smog-forming pollution than the average new car sold before 2012. To reduce GHG emissions, CARB, in conjunction with the EPA and NHTSA, adopted new GHG standards for model years 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% by 2025. The Zero Emissions Vehicle (ZEV) Program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in 2018 to 2025 model years. The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market.

EO B-16-12. EO B-16-12 (2012) directs state entities under the governor's direction and control to support and facilitate development and distribution of ZEVs. This executive order also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80% less than 1990 levels by 2050. In furtherance of this executive order, the governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

AB 1236. AB 1236 (2015), as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact on public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provides for appeal of that decision to the planning commission. The bill required local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, to create an expedited and streamlined permitting process for electric vehicle charging stations.

Solid Waste

AB 939 and AB 341. In 1989, AB 939, known as the Integrated Waste Management Act (PRC Sections 40000 et seq.), was passed because of the increase in waste stream and decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being

disposed of, and jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes will assist the state in reaching the 75% goal by 2020.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the executive order extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The executive order includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increased the requirements for landscape water use efficiency and broadened its applicability to include new development projects with smaller landscape areas.

EO B-37-16. Issued May 2016, EO B-37-16 directed the State Water Resources Control Board to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The State Water Resources Control Board also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The State Water Resources Control Board and Department of Water Resources will develop new, permanent water use targets that build upon the existing state law requirements that the state achieve 20% reduction in urban water usage by 2020. EO B-37-16 also specifies that the State Water Resources Control Board permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.

Other State Regulations and Goals

SB 97. SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines in the California Code of Regulations (CCR), a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis, or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4(a)). The CEQA Guidelines require a lead agency to consider the extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through implementation of project features or offsite measures. The adopted amendments do not establish a GHG emissions threshold, but allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009a).

With respect to GHG emissions, the CEQA Guidelines state in CCR Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions, or by relying on "qualitative analysis or other performance-based standards" (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: the extent a project may increase or reduce GHG emissions compared to the existing environmental setting; whether project emissions exceed a threshold of significance that the lead agency determines applies to the project; and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the executive order directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009a), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability to climate change, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of updated Safeguarding California plans followed in March 2016 (CNRA 2016) and in January 2018 (CNRA 2018).

2015 State of the State Address and the 2016 State of the State Address. In January 2015, Governor Brown in his inaugural address and annual report to the Legislature established supplementary goals that would further reduce GHG emissions over the next 15 years. These goals include an increase in California's renewable energy portfolio from 33% to 50%, a reduction in vehicle petroleum use for cars and trucks by up to 50%, measures to double the efficiency of existing buildings, and measures to decrease emissions associated with heating fuels. In his January 2016 address, Governor Brown established a statewide goal to bring per-capita GHG emissions down to 2 MT per person, which reflects the goal of the Global Climate Leadership Memorandum of Understanding (Under 2 Memorandum of Understanding) to limit global warming to less than 2°C by 2050. The Under 2 Memorandum of Understanding agreement pursues emission reductions of 80% to 95% below 1990 levels by 2050 and/or reach a per-capita annual emissions goal of less than 2 MT by 2050. A total of 187 jurisdictions representing 38 countries and six continents, including California, have signed or endorsed the Under 2 Memorandum of Understanding (Under 2 Coalition 2017). As of 2019, Governor Newsom has not enacted any such changes to the state's GHG reduction goals.

Local Regulations

City of St. Helena 1993 General Plan

The Land Use and Growth Management, Transportation, Public Health and Safety, and Public Facilities and Services Elements of the City of St. Helena 1993 General Plan (City of St. Helena 1993) provides the following guiding policies related to reducing GHG emissions:

> **Policy 2.6.21:** Require new residential projects to be designed to facilitate non-automobile modes of travel (i.e., walking, biking, transit, etc.).
>
> **Policy 5.8.1:** All new development on collector streets shall provide sidewalks or walkways to be located with the City's right-of-way for the collector street. Further,

unless exempted or deferred by the City Council, all residential developments shall provide sidewalks on all local streets within the development.

- It is a goal of the City that it continue to remain at a size where the majority of development is within a 10 minute walk of the downtown. Sidewalks or walkways will reinforce the pedestrian orientation of the City.

Policy 8.2.5: Support a population and employment growth policy which will not exceed ABAG population and employment projections. This includes balancing the ratio of employment to population to protect, preserve and enhance the air quality within the area.

Policy 9.2.3: Adopt and implement water conservation measures as a means of extending the capabilities of the City's water supply.

- Adoption of a Toilet Retrofit Ordinance to convert high-use fixtures to low-flow fixtures and a Water-Efficient Landscape Ordinance to require water-conserving xeriscapes could increase the number of available water connections. It is estimated that 1600 residential units could be converted to low-flow fixtures saving about 50 acre-feet of water per year which could service 125 units.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The Land Use and Growth Management, Public Health and Safety, and Climate Change Elements of the City of St. Helena 2019 General Plan (City of St. Helena 2019) provide policies regarding GHG emissions, including the following:

Policy LU2.7: Ensure safe, walkable, and bikeable residential neighborhoods and vibrant, livable streets.

Policy PS1.3: Encourage effective regulation of those sources of air pollution, both inside and outside of St. Helena, which affect air quality, by implementing as many of the recommendations of the Napa County Congestion Management Plan as is feasible.

Policy CC1.1: Promote a "walkable" and "bikeable" city.

Policy CC2.1: Encourage measures to reduce energy demand through conservation and efficiency.

Policy CC2.2: Support local efforts to improve the energy supply by switching from fossil fuels to renewables.

Policy CC4.3: Strengthen water conservation measures that result in significant reductions in local water use and the protection of local water resources.

3.7.4 Impacts

Methods of Analysis

GHG emissions from construction and operation of the Proposed Project were calculated using CalEEMod Version 2016.3.2. Details relevant to the modeling assumptions is described below.

Construction

Construction model inputs are described in more detail in Section 3.3, Air Quality, of this Environmental Impact Report. In summary, the Proposed Project was assumed to be constructed over a 6-year buildout.

Operations

Operational GHG emissions were estimated for buildout of the Proposed Project. The first full year of operation was assumed to be 2029, which is based on the completion of all construction activities.

Area Sources

CalEEMod was used to estimate GHG emissions from the Proposed Project's area sources, including operation of landscape maintenance equipment, which produces minimal GHG emissions. See Section 3.3, Air Quality, for a discussion of landscaping equipment emissions calculations. Consumer product use and architectural coatings result in volatile organic compound emissions, which are analyzed as part of the air quality analysis.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). The estimation of operational energy emissions was based on CalEEMod land use defaults and units or total area (i.e., square footage) of the proposed residential land use**.** The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission in December 2018. The 2019 standards became effective January 1, 2020. CalEEMod uses the 2016 version of Title 24 as a basis for energy modeling, however this analysis reflects compliance with the 2019 standards. Per the CEC Impact Analysis for the 2019 Update to the California Energy Efficiency Standards for Residential and Non-Residential Buildings, the first-year savings for newly constructed single-family residences, are 596 gigawatt hours of electricity, 50.4 megawatts of demand, and 4.42

million therms of gas, representing reductions from the 2016 Title 24 standard of 4% of electricity, 15% of demand, and 9% of natural gas, respectively. The first-year savings for low-rise multifamily buildings are 91 gigawatt hours, 4.1 megawatts of demand, and 0.25 million therms of gas. On a percent savings basis compared to the 2016 standards, the multifamily, savings are 2% of electricity, 8% of demand and 5% of gas.

Emissions were calculated by multiplying the energy use by the utility carbon intensity (pounds of GHGs per kilowatt-hour for electricity or 1,000 British thermal units for natural gas) for CO_2 and other GHGs. Annual natural gas (non-hearth) and electricity emissions were estimated in CalEEMod using the default emissions factors for the proposed land uses.

Two electricity service providers would be available to provide service to the Proposed Project. The Marin Clean Energy, which is a community choice aggregation program and Pacific Gas & Electric (PG&E). While residents within the City are automatically enrolled into Marin Clean Energy, an individual can opt out and choose PG&E for electricity service. As discussed under the Regulatory Setting in Section 3.3, SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020. Marin Clean Energy provides a higher percentage of electricity from renewable sources than PG&E; however, this analysis is based on the lower RPS or conservative estimate in order to estimate the Proposed Project's GHG emissions. Therefore, the CO_2 emissions intensity factor for utility energy use in CalEEMod was adjusted consistent with the PG&E 2020 Corporate Responsibility and Sustainability Report, which reported that PG&E has delivered 30% of the electricity from RPS eligible resources and has emissions rate of 206 pounds of CO_2 per megawatt-hour (PG&E 2020).

Mobile Sources

Mobile sources for the Proposed Project would primarily be motor vehicles traveling to and from the Project site. The anticipated trip generation, including the trip rates and total trips, are based on the Proposed Project's Traffic Impact Study prepared by Dudek (see Appendix K). CalEEMod was used to calculate the emissions resulting from on-road mobile sources associated with residents traveling to and from the proposed land use types.

Default trip generation rates included in CalEEMod for each analyzed proposed land uses were adjusted to match the Proposed Project's trip generation. In addition, Saturday and Sunday trip rates were adjusted based on the CalEEMod default trip rates and the Proposed-Project-specific trip rates presented in the traffic study. The CalEEMod default and assumed trip rates are depicted in Table 3.7-4.

Table 3.7-4
CalEEMod Default and Adjusted Trip Rates

Land Use Type	Size Metric	CalEEMod Default Vehicle Trip Rates			Proposed Project Vehicle Trip Rates[1]		
		Weekday Trip Rate	Saturday Trip Rate	Sunday Trip Rate	Weekday Trip Rate	Saturday Trip Rate	Sunday Trip Rate
Single-Family Residential	Dwelling Unit	9.52	9.91	8.62	9.44	9.56	8.31
Accessory Dwelling Units	Dwelling Unit	6.59	7.16	6.07	7.36	8.18	6.94
Multi-Family Units	Dwelling Unit	5.81	5.67	4.84	9.44	9.56	8.31

Note:

1 Weekday trip rates were provided in the Proposed Project's Traffic Impact Study. Proposed Project Saturday and Sunday trips rates were adjusted based on the ratio of the CalEEMod default Saturday and Sunday trip rates to the CalEEMod default weekday trip rate.

Sources: CAPCOA 2017; Dudek 2020.

Solid Waste

The Proposed Project would generate solid waste, and therefore, result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste.

Water and Wastewater

Supply, conveyance, treatment, and distribution of water to serve the Proposed Project requires the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the Proposed Project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. Water consumption estimates for indoor use were based on data provided within the Preliminary Water Calculations Technical Memorandum (RSA 2019). The total water demand for each land use type as provided in the memorandum were allocated based on the default proportions from CalEEMod's indoor water use. Water consumption for outdoor water use were estimated for the Proposed Project using CalEEMod default values.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Regarding impacts from GHGs, both BAAQMD and the California Air Pollution Control Officers Association consider GHG impacts to be exclusively cumulative impacts (BAAQMD 2017; CAPCOA 2008); therefore, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. This analysis uses both a quantitative and a qualitative approach. The quantitative approach is used to address the first significance criterion: "Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?" This analysis considers that, because the quantifiable thresholds developed by BAAQMD were formulated based on AB 32 and California Climate Change Scoping Plan reduction targets for which its set of strategies were developed to reduce GHG emissions statewide, a project cannot exceed a numeric BAAQMD threshold without also conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, if a project exceeds a numeric threshold and results in a significant cumulative impact, it would also result in a significant cumulative impact with respect to plan, policy, or regulation consistency, even though the project may incorporate measures and have features that would reduce its contribution to cumulative GHG emissions.

Separate thresholds of significance have been established by the BAAQMD for operational emissions from stationary sources (such as generators, furnaces, and boilers) and nonstationary sources (such as on-road vehicles) (BAAQMD 2017). The threshold for stationary sources is 10,000 MT CO_2e per year (i.e., emissions above this level may be considered significant). For nonstationary sources, the following three separate thresholds have been established:

- Compliance with a Qualified Greenhouse Gas Reduction Strategy (i.e., if a project is found to be out of compliance with a Qualified Greenhouse Gas Reduction Strategy, its GHG emissions may be considered significant).
- 1,100 MT CO_2e per year (i.e., emissions above this level may be considered significant).
- 4.6 MT CO_2e per service population per year (i.e., emissions above this level may be considered significant). (Service population is the sum of residents plus employees expected for a development project.)

The quantitative threshold of 1,100 MT CO_2e annually adopted by BAAQMD is applied to this analysis. If a proposed project's GHG emissions would exceed this threshold then, consistent with BAAQMD Guidelines, it would be considered to have a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact on climate change.

Impacts and Mitigation Measures

3.7-1: Would the Proposed Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? This impact would be less than significant.

Construction

Construction of the proposed residences along with site clearing, grading and installation of utilities would result in GHG emissions, which are primarily associated with use of off-road construction equipment, vendor trucks, and worker vehicles. Since the BAAQMD has not established construction-phase GHG thresholds, construction GHG emissions were amortized assuming a 30-year development life after completion of construction and were compared to the BAAQMD operational GHG threshold. Amortized GHG emissions associated with Proposed Project construction would result in annualized generation of 17 MT CO_2e.

A detailed depiction of the construction schedule—including information regarding phasing, equipment used during each phase, trucks, and worker vehicles—is included in Appendix C. The estimated Proposed-Project-generated GHG emissions from construction activities assuming a 6-year buildout are shown in Table 3.7-5. The 6-year buildout assumes that building construction activities would be spread out over a 6-year period, occurring on average for approximately 7 months per year. Although, the construction duration could be spread out over a 6-year period, site preparation/grading/utility work would occur during the first phase of construction.

Table 3.7-5
Estimated Annual Construction Greenhouse Gas Emissions – 6-Year Buildout

Emission Source/Year	CO_2e (MT/yr)
2023	287.9
2024	225.1
2025	302.9
2026	255.0
2027	219.4
2028	200.1
Total	1,490.4
Amortized Construction Emissions	49.7

Notes: Total emissions may not sum due to rounding.
CO_2e = carbon dioxide-equivalent; MT/year = metric tons per year
Source: See Appendix C for detailed results.

Operations

Following the completion of construction activities, the Proposed Project would generate GHG emissions from mobile sources (vehicle trips), area sources (landscaping equipment), energy

sources (natural gas and electricity consumption), solid waste generation, water supply, and wastewater treatment. The estimated operational Proposed-Project-generated GHG these sources are shown in Table 3.7-6.

Table 3.7-6
Estimated Annual Operational Greenhouse Gas Emissions

Proposed Project Emission Source	CO_2e (MT/yr)
Area	12.0
Energy	158.3
Mobile	549.2
Solid Waste	34.9
Water Supply and Wastewater	10.6
Total	765.0
Amortized Construction Emissions	49.7
Operation + Amortized Construction Total	814.7
BAAQMD GHG Threshold	*1,100*
Significant (Yes or No)?	*No*

Note: CO_2e = carbon dioxide-equivalent; MT/year = metric tons per year
Source: See Appendix C for detailed results.

Table 3.7-6 indicates that the GHG emissions associated with development of the Proposed Project would be below BAAQMD's GHG threshold of 1,100 MT CO_2e per year. Therefore, the Proposed Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and this would represent a cumulatively **less-than-significant** GHG impact.

Mitigation Measures

None required.

3.7-2: Would the Proposed Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? This impact would be less than significant.

The City is currently in the process of developing a GHG Reduction Plan and a Climate Action Plan, which would include various GHG reduction measures that would help the City reduce communitywide GHG emissions. Thus, the City does not have an adopted plan that would be applicable to the Proposed Project. However, consistency with other plans including the Plan Bay Area, Scoping Plan, and future GHG reduction goals are described below.

ABAG and Metropolitan Transportation Commission's Plan Bay Area

The Plan Bay Area is a regional growth management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks for the San Francisco Bay Area (ABAG and MTC 2017). The Plan Bay Area is not directly applicable to the Proposed Project because the underlying purpose of the Plan Bay Area is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the region, as stipulated under SB 375. Within the Plan Bay Area, the core strategy includes "focused growth" in existing communities along existing transportation networks. The key to implementing the focused growth strategy are Priority Development Areas and Priority Conservative Areas. In addition, the Metropolitan Transportation Commission and the ABAG Executive Board established seven goals and 13 performance targets to measure Plan Bay Area 2040's effectiveness in addressing the major challenges facing the region. Development of the Project site would support the overarching intent of the Plan Bay Area through developing residential land uses including a component dedicated for affordable housing, which would help the region attain its adequate housing targets. Therefore, the Proposed Project would generally be considered consistent with applicable goals and strategies set forth in the Plan Bay Area.

CARB's Scoping Plan

As discussed above in Section 3.7.3, the Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[3] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low-Carbon Fuel Standard), among others.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 3.7-7 highlights measures that have been, or will be, developed under the Scoping Plan and the Proposed Project's consistency with Scoping Plan

[3] The Final Statement of Reasons for the amendments to the State CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009b).

measures. To the extent that these regulations are applicable to the Proposed Project, its inhabitants, or uses, the Proposed Project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Table 3.7-7
Proposed Project Consistency with Scoping Plan
Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	Consistent. Proposed Project residents and visitors would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low-Carbon Fuel Standard	T-2	Consistent. Motor vehicles driven by Proposed Project residents and visitors would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	Consistent. The Project site is located near transit services (VINE Transit) which would reduce dependence on passenger vehicle trips and shorter trip lengths, which would reduce GHG emissions.
Advanced Clean Transit	Proposed	Not applicable.
Last-Mile Delivery	Proposed	Not applicable.
Reduction in VMT	Proposed	Not applicable.
Vehicle Efficiency Measures Tire Pressure Fuel Efficiency Tire Program Low-Friction Oil Solar-Reflective Automotive Paint and Window Glazing	T-4	Consistent. It is assumed motor vehicles driven by Proposed Project residents and visitors would maintain proper tire pressure when their vehicles are serviced. Replacement tires and low-friction oil would be used in compliance with CARB vehicle standards that are in effect at the time of vehicle or tire purchase.
Ship Electrification at Ports (Shore Power)	T-5	Not applicable.
Goods Movement Efficiency Measures Port Drayage Trucks Transport Refrigeration Units Cold Storage Prohibition Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification Goods Movement Systemwide Efficiency Improvements Commercial Harbor Craft Maintenance and Design Efficiency Clean Ships Vessel Speed Reduction	T-6	Not applicable.
Heavy-Duty Vehicle GHG Emission Reduction Tractor-Trailer GHG Regulation Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	Not applicable.

Table 3.7-7
Proposed Project Consistency with Scoping Plan
Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Proposed Project	T-8	Not applicable.
Medium and Heavy-Duty GHG Phase 2	Proposed	Not applicable.
High-Speed Rail	T-9	Not applicable.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	Consistent. The Proposed Project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards.
Energy Efficiency (Natural Gas)	CR-1	Not applicable.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	Not applicable.
Combined Heat and Power	E-2	Not applicable.
Renewable Portfolios Standard (33% by 2020)	E-3	Consistent. The electricity used by the Proposed Project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Renewable Portfolios Standard (50% by 2050)	Proposed	Consistent. The electricity used by the Proposed Project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
SB 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	Consistent. The Proposed Project would be required to implement on-site generation of renewable energy using solar panels on available rooftop space to offset a portion of the Proposed Project's electricity consumption as mandated by the California Building Standards Commission. However, specifications regarding the size of rooftop solar is currently unknown.
Water Sector		
Water Use Efficiency	W-1	Consistent. The Proposed Project would be required to comply with statewide water conservation requirements reducing water usage by 20%. Furthermore, low-flow plumbing equipment would be installed including waterless urinals, two flush toilets, and automated restroom faucets, in compliance with state building codes.
Water Recycling	W-2	Not applicable. Recycled water is not available to the site.
Water System Energy Efficiency	W-3	Not applicable. This is applicable for the transmission and treatment of water but is not applicable to the Proposed Project.
Reuse Urban Runoff	W-4	Not applicable. The Proposed Project would not reuse urban water on-site.
Renewable Energy Production	W-5	Not applicable. This is applicable for wastewater treatment systems but is not applicable to the Proposed Project.

Table 3.7-7
Proposed Project Consistency with Scoping Plan
Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	Not applicable.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	Consistent. The Proposed Project would be required to meet green building standards that are in effect at the time of design and construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	Consistent. The Proposed Project would be required to be constructed in compliance with local green building standards in effect at the time of building construction.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-1	Not applicable. This is applicable for existing buildings only. It is not applicable for the Proposed Project except as future standards may become applicable to existing buildings.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	Not applicable.
Oil and Gas Extraction GHG Emission Reduction	I-2	Not applicable.
Reduce GHG Emissions by 20% in Oil Refinery Sector	Proposed	Not applicable.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	Not applicable.
Refinery Flare Recovery Process Improvements	I-4	Not applicable.
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	Not applicable.
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	Not applicable.
Increasing the Efficiency of Landfill Methane Capture	RW-2	Not applicable.
Mandatory Commercial Recycling	RW-3	Consistent. During both construction and operation, the Proposed Project would be required to comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all wastes would be recycled to the maximum extent possible.
Increase Production and Markets for Compost and Other Organics	RW-3	Not applicable.
Anaerobic/Aerobic Digestion	RW-3	Not applicable.
Extended Producer Responsibility	RW-3	Not applicable (applicable to product designer and producers).

Table 3.7-7
Proposed Project Consistency with Scoping Plan
Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Environmentally Preferable Purchasing	RW-3	Not applicable (applicable to product designer and producers).
Forests Sector		
Sustainable Forest Target	F-1	Not applicable.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	Consistent. Proposed Project residents would be prohibited from performing air conditioning repairs and would be required to use professional servicing.
SF_6 Limits in Non-Utility and Non-Semiconductor Applications	H-2	Not applicable.
Reduction of Perfluorocarbons (PFCs in Semiconductor Manufacturing	H-3	Not applicable.
Limit High GWP Use in Consumer Products	H-4	Consistent. The Proposed Project would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	Consistent. It is assumed motor vehicles driven by Proposed Project residents would comply with the leak test requirements during smog checks.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	Not applicable.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	Not applicable.
SF_6 Leak Reduction Gas Insulated Switchgear	H-6	Not applicable.
40% reduction in methane and hydrofluorocarbon (HFC) emissions	Proposed	Not applicable.
50% reduction in black carbon emissions	Proposed	Not applicable.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	Not applicable. The Proposed Project would not prevent CARB from implementing this measure.

Notes: CARB = California Air Resources Board; CCR = California Code of Regulations; GHG = greenhouse gas; GWP = global warming potential; SB = Senate Bill; SF_6 = sulfur hexafluoride
Sources: CARB 2008, 2017a.

Based on the analysis in Table 3.7-7, the Proposed Project would be considered consistent with the applicable strategies and measures in the CARB Scoping Plan.

SB 32 and EO S-3-05

Regarding consistency with SB 32 (goal of reducing GHG emissions to 40% below 1990 levels by 2030) and EO S-3-05 (goal of reducing GHG emissions to 80% below 1990 levels by 2050),

there are no established protocols or thresholds of significance for that future-year analysis. However, CARB has expressed optimism regarding the 2030 and 2050 goals. It states in the First Update that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). Regarding the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update states the following (CARB 2014):

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under Assembly Bill 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the Second Update, which states, "[t]his Plan draws from the experiences in developing and implementing previous plans to present a path to reaching California's 2030 GHG reduction target. The Plan is a package of economically viable and technologically feasible actions to not just keep California on track to achieve its 2030 target, but stay on track for a low- to zero-carbon economy by involving every part of the state" (CARB 2017a). The Second Update also states that although "the Scoping Plan charts the path to achieving the 2030 GHG emissions reduction target, we also need momentum to propel us to the 2050 statewide GHG target (80% below 1990 levels). In developing this Scoping Plan, we considered what policies are needed to meet our mid-term and long-term goals" (CARB 2017a).

As discussed previously, the Proposed Project would be considered consistent with the Plan Bay Area and CARB's 2017 Scoping Plan and would not conflict with the state's trajectory toward meeting future GHG reductions. Since the specific path to compliance for the state in regards to the long-term goals would likely require development of technology or other changes that are not currently known or available, specific additional mitigation measures for the Proposed Project would be speculative and cannot be identified at this time. With respect to future GHG targets under SB 32 and EO S-3-05, CARB made clear in its legal interpretation that it has the requisite authority to adopt whatever regulations are necessary, beyond the AB 32 horizon year of 2020, to meet SB 32's 40% reduction target by 2030 and EO S-3-05's 80% reduction target by 2050; this legal interpretation by an expert agency provides evidence that future regulations would be adopted to continue the state on its trajectory toward meeting these future GHG targets.

Based on the preceding considerations, the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted to reduce the emissions of GHGs, and no mitigation is required. This impact would be **less than significant**.

Mitigation Measures

None required.

3.7.5 Cumulative Impacts

The geographic context for analyzing cumulative impacts is the San Francisco Bay Area Air Basin.

3.7-3: Would the Proposed Project contribute to cumulative GHG emissions within the region. The Project's contribution would not be considerable.

GHG impacts are cumulative impacts (BAAQMD 2017; CAPCOA 2008); therefore, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. If a project exceeds the identified significance thresholds, its contribution of GHG emissions would be cumulatively considerable, resulting in a cumulatively significant impact on climate change. As discussed in Impact 3.7-1, the Proposed Project would not result in GHG emissions in exceedance of the BAAQMD significance threshold. Therefore, the Proposed Project's GHG emissions would not be considered cumulatively considerable and the Proposed Project's contribution would be **less than significant.**

Mitigation Measures

None required.

3.7.6 References

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3.8 HAZARDS AND HAZARDOUS MATERIALS

3.8.1 Introduction

This section provides an overview of the potential presence of hazards and hazardous materials and other public health hazards on and near the proposed Hunter Subdivision Project (Proposed Project) site and evaluates the potential impact to public health and safety and the environment that could result from the development and operation of the Proposed Project.

Comments received in response to the Notice of Preparation included concerns regarding flooding hazards, hazardous materials, fire hazards, and emergency access. A copy of the Notice of Preparation and comments received is included in Appendix A. Comments regarding the potential for flooding are addressed in Section 3.9, Hydrology and Water Quality, while hazardous materials released during a flood are discussed within this section. Hazardous materials, fire hazards, and emergency access are addressed in this section.

The evaluation is based on a review of Project site plans, City of St. Helena (City) planning documents, a review of historical land use documents and regulatory agency information, a Phase I Environmental Site Assessment (ESA) included in Appendix G, and a review of other available materials from state and federal agencies and databases. Other sources consulted are listed in Section 3.8.6, References.

3.8.2 Environmental Setting

This section describes the existing hazardous materials setting on and near the Project site, the existing regulatory framework for hazardous materials and hazardous waste and applicable worker health and safety requirements, and local policies related to public health and safety.

Existing Conditions

Hazardous materials, as defined by the California Health and Safety Code, may be present in the subsurface of any site as a result of past and present land uses. Exposure to hazardous materials could adversely affect the health of construction workers or the public during construction, as well as residents, or visitors to a site during operation if the hazardous materials are not contained, removed, or remediated.

Site Description and History

As stated in Chapter 2, Project Description, the Project site consists of approximately 17 acres with a small vineyard located in the southwestern and along the northwestern “panhandle” portion of the site. There are no structures or buildings located on the Project site. An existing groundwater well is located near the southeastern portion of the site. A stormwater detention

basin, as part of a previous City Flood Protection Project, is located to the north-northeast of the Project site. Historically the site has been used primarily for agricultural cultivation; likely vineyards and orchards, discussed in more detail below.

Historic Land Uses

As noted in Appendix G, past potential hazardous materials issues associated with historic land uses at and adjacent to the Project site were evaluated by reviewing historical aerial photographs from 1947, 1953, 1958, 1968, 1973, 1982, 1993, 2006, 2010, and 2014. Historic photographs indicate that the majority of the Project site was used for agricultural cultivation, likely vineyards and orchards. As shown in the photographs from 1947 through 1968, five ponds are visible outside of the Project site boundaries generally adjacent to the south and southeast. It appears these ponds were removed after 1968 to construct the road and the adjacent Vineyard Valley Mobile Home Park. The Project site has remained as mostly agriculture with limited development.

The first development of the Project site appears to be prior to 1947 based on a review of aerial photographs, which shows an orchard in the northeast portion of the site while the remainder is visible as undeveloped grasslands. Holding ponds are visible along the southeastern border of the Project site and the surrounding areas consist of low-density residential development to the southeast and agriculture towards the north and west.

From 1953 through 1968, historic photos indicate no significant changes, other than the removal of the orchard. In 1973, vineyards appear on the southwest portion of the Project site and it appears the holding ponds were removed, and the initial stages of residential development are visible to the south and east.

Significant residential development surrounding the Project site first appears in 1982 as well as the presence of a small holding pond on the northeast portion of the Project site. The 1993 and 2006 photographs have little to no change to the site but indicate significant development of residences surrounding the site.

In the 2010 photograph, significant changes to the northern portion of the Project site are indicated. On the west, extending from the southern border, adjacent to the western boundary of the site, to the northern boundary of the site, a gravel access road appears. Grading on the Project site and to the north of the site, including the construction of a levee next to the riparian area north of the Project site is shown. In a more recent 2014 photograph, areas of fill has been covered with grasslands, the levee is completed, and an access maintenance road is shown along the northwestern boundary of the Project site extending from the southern end to north of the Project site.

Sensitive Receptors

The Project site is bordered by residential development to the south and east. The closest schools to the Project site include the public Robert Louis Stevenson Middle School (0.67 miles west), the private St. Helena Montessori School (0.61 miles east), and the public St. Helena Elementary School (0.53 miles southwest). The Santa Rosa Memorial Hospital is located approximately 15 miles west of the Project site.

The Angwin-Parrett Field airport is the closest airport to the Project site and is located approximately 4.5 miles to the north-northeast.

Previous Site Investigations

In accordance with the American Society for Testing and Materials (ASTM) Standard E-1527, a Phase I ESA (Appendix G) was prepared by EBA Engineering on March 6, 2018.

Hazardous material issues at the Project site were evaluated by a thorough review of historical land use information, regulatory agency hazardous materials records and databases, and a site reconnaissance as part of the Phase I ESA.

The Project site was not identified in any regulatory agency files or databases as having recognized environmental concerns. The Phase I ESA determined that there was no indication of the historic use, generation, or disposal of hazardous materials and/or waste. There was no indication of the presence of any underground storage tanks on the Project site.

Agricultural chemicals have been recorded for use on the onsite vineyard from the Napa County Agricultural Commissioner's Office (Appendix G). Agricultural chemicals recorded included herbicides, fungicides, and miticides. All chemicals used on the site were overseen by the Napa County Agricultural Commissioner's Office in accordance with Title 3 of the California Code of Regulations. No agricultural chemicals were stored or mixed onsite. Historic aerial photographs of the site indicate an orchard was present dating from the 1940s; an era where it was common to use organochlorines and arsenic as pesticides; however, no record of use was found and no further subsurface investigation was identified (Appendix G).

A search of nearby areas in the Phase I ESA determined that no open or active sites were within 1,000 feet of the Project site. Based on a one-mile search radius (required by ASTM Standard 1527-13), three sites were identified as open/active for generation or handling of hazardous materials and/or wastes that are regulated for such use and disposal. The Phase 1 ESA notes 20 sites were found to be closed with regulatory oversight. Other open sites included seven sites that either were in the process of remediation, or on a list for being an active business such as an automotive shop. Due to their status, distance from the Project site, and

listing type (listed for generation and not for large spills), it was determined that these sites would not pose an environmental threat to the Proposed Project and therefore were not considered a recognized environmental concern. A complete list of sites can be found in Appendix G.

Additional Database Review

In addition to the Phase I ESA, the Department of Toxic Substances Control's (DTSC) online database system, EnviroStor, was reviewed for recorded hazardous materials sites near the Project site. The Project site is not listed as a hazardous materials spill site, cleanup site, handler of hazardous materials, or facility which transports, stores, or produces hazardous materials (DTSC 2019).

Two sites are listed on the EnviroStor database, Klass Cleaners and Pacific Gas & Electric (PG&E), which are located approximately 2,440 feet and 2,700 feet south of the Project site, respectively. Klass Cleaners is an active voluntary cleanup site. The site has been a dry cleaning facility for the past 40+ years, which included the use, storage, and handling of hazardous materials including acetone, benzene, chloroform, tetrachloroethylene (PCE) and trichloroethylene (TCE) (EnviroStor 2019a). The business occupied the southern third of the building located at 1141 Main Street, approximately 2,440 feet south of the Project site. The site has been confirmed to have contaminated groundwater directly to the north (under a current gas station), and to the southeast of the building. Soil vapor contamination has been found directly under the building but has not been identified off the property. The complete lateral and vertical extent of contamination has not been determined (EnviroStor 2019a). The site became active through a Request for Agency Oversight Application on June 29, 2018. In August of 2018, PCE was detected through a site characterization report. Due to the site's location, groundwater movement, contamination characteristics, and type of contamination, it is unlikely that this site would have an impact on the Proposed Project.

The PG&E site is a certified, operation and maintenance defined site as of July 18, 2017. This site was a manufactured gas plant which operated from 1883 until 1926. The site was purchased by PG&E in 1930 and was dismantled upon introduction of natural gas to the region in 1931. The site is located at 1301 Mitchell Drive, approximately 2,700 feet south of the Project site. During a standard site screening subsurface investigation at the site in 1987, it was discovered that polycyclic aromatic hydrocarbons, petroleum hydrocarbons, arsenic, and lead were detected. Remedial actions of the site were conducted in two phases. The first phase, excavation, was completed in 2007 and a dual phase soil vapor/ groundwater extraction system was installed. This system was operated for approximately 5 years. The second phase was completed in 2014 and included excavating and removing potentially contaminated soils up to 8 feet below the ground surface (EnviroStor 2019b). Groundwater was sampled and monitored

throughout remediation. A long-term operation and maintenance plan includes continuous groundwater monitoring and site inspections to ensure compliance with property use restrictions. In addition, land use restrictions between PG&E and DTSC dated March 17, 2017, include the prohibition of a residence, hospital, public or private schools, or a day care. Due to this site's characteristics, location from the Project site, and groundwater sampling which has not peaked above remediation goals, this site is unlikely to pose a hazardous risk to the Proposed Project.

Wildland Fire Hazards

In accordance with California Public Resource Code Section 4201-4201 and Government Code Sections 51175–51189, the California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards based on available fuels, terrain, weather patterns, and other relevant factors associated with wildland fire risks. These mapped zones, referred to as Fire Hazard Severity Zones, represent the risks associated with wildland fires. Under state law Government Code Section 511182, areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas. There are two responsible designated areas, Local Responsibility Areas and State Responsibility Areas, which are in control of wildland fires within their respective areas. These are mapped through CAL FIRE.

On August 17, 2020, a series of overnight lighting strikes started fires that burned over 300,000 acres across five counties including Napa County. The LNU Lighting Complex fire was fully contained by early October. In late September 2020, the Glass Fire started and burned over 67,484 acres and destroyed over 1,800 structures in Napa County and Sonoma County. The fire was fully contained on October 20, 2020. The hills visible from the Project site experienced fire damage. The Project site is located within a Local Responsibility Area that is rated as a Non Very High fire Hazard Safety Zone (Non-VHFHSZ) (CalFire 2019).

3.8.3 Regulatory Setting

The U.S. Environmental Protection Agency (EPA) has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA) for issues within the state. In turn, the local agency, Napa County Department of Environmental Management has been granted responsibility for implementation and enforcement of many hazardous materials regulations within the City under the Certified Unified Program Agency (CUPA) Program.

Federal Regulations

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act (RCRA). The RCRA establishes a framework for national programs to achieve environmentally sound management of hazardous and non-hazardous wastes. The RCRA was designed to protect human health and the environment, reduce or eliminate the generation of hazardous waste, and conserve energy and natural resources. The RCRA also promotes resource recovery techniques. The Hazardous and Solid Waste Amendments of 1984 expanded the scope of the RCRA and increased the level of detail in many of its provisions. The Hazardous Waste Management subchapter of the RCRA deals with a variety of issues regarding the management of hazardous materials, including the export of hazardous waste, state programs, inspections of hazardous waste disposal facilities, enforcement, and the identification and listing of hazardous waste. In California, the EPA has authorized the DTSC to administer the RCRA program, pursuant to the State's Hazardous Waste Control Law.

Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act amended CERCLA on October 17, 1986. The Superfund Amendments and Reauthorization Act stresses the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites, requires Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations, provided new enforcement authorities and settlement tools, increased state involvement in every phase of the Superfund program, increased the focus on human health problems posed by hazardous waste sites, encouraged greater citizen participation in making decisions on how sites should be cleaned up, and increased the size of the trust fund.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Code of Federal Regulations (CFR) Title 49. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation

emergencies are the California Highway Patrol and the California Department of Transportation. These agencies also govern permitting for hazardous materials transportation.

EPA Regional Screening Levels

Regional Screening Levels are tools for evaluating and cleaning up contaminated sites. Regional Screening Levels for the Superfund programs provide comparison values for residential and commercial/industrial exposures to soil, air, and tap water. These values are risk-based concentrations, derived from standardized equations combining exposure information assumptions with EPA toxicity data. They are considered to be protective for humans (including sensitive groups) over a lifetime.

State Regulations

Routine hazardous materials management in California is administered under the CUPA program. The CUPA program was established under the 1993 California Senate Bill 1082 to reduce the cost and improve the efficiency of enforcement of hazardous materials laws and regulations.

California Government Code Section 65962.5(a), Cortese List

The Hazardous Waste and Substance Sites (Cortese) List is a planning document used by state and local agencies and developers to comply with California Environmental Quality Act (CEQA) requirements to provide information about the location of hazardous materials release sites. California Government Code Section 65962.5 requires the CalEPA to develop, at least annually, an updated Cortese List. The DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List. The Project site is not listed on the Cortese List database.

Title 22 of the California Code of Regulations and Hazardous Waste Control Law, Chapter 6.5

The DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the RCRA and the California Hazardous Waste Control Law. Both laws impose “cradle-to-grave” regulatory systems for handling hazardous waste in a manner that protects human health and the environment. CalEPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other Certified Unified Program Agencies, including the Napa County Environmental Health Division. In California, the EPA has authorized the DTSC to administer the RCRA program, pursuant to the state’s Hazardous Waste Control Law.

California Human Health Screening Levels

California Human Health Screening Levels (CHHSLs or "Chisels") are concentrations of 54 hazardous chemicals in soil or soil gas that CalEPA considers to be below thresholds of concern for risks to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment on behalf of CalEPA. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by the EPA and CalEPA. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding CHHSL can be assumed to not pose a significant health risk to people who may live or work at the site. There are separate CHHSLs for residential and commercial/industrial sites.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the state. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The California Natural Disaster Assistance Act is activated after the following occurs: a local declaration of emergency and the California Emergency Management Agency gives concurrence with the local declaration, or the governor issues a proclamation of a state emergency. Once the act is activated, local government is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

Title 14 Division 1.5 of the California Code of Regulations

Title 14 of the California Code of Regulations, Division 1.5, establishes the regulations for CAL FIRE and is applicable in all State Responsibility Areas—areas where CAL FIRE is responsible for wildfire protection. Most of the unincorporated area of Napa County is a State Responsibility Area, and any development in a State Responsibility Area must comply with these regulations. The City is not within the unincorporated area of Napa County and is not within a State Responsibility Area. Among other things, Title 14, Section 1270 et seq. establishes minimum standards for emergency access, fuel modification, setback to property lines, signage, and water supply.

Uniform Fire Code

The Uniform Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The code contains specialized technical regulations related to fire and life safety.

Building, Fire and Residential Code

The State Fire Marshal's Building, Fire and Residential Code went into effect on January 1, 2011. This code incorporated the requirement of residential fire sprinklers in all new one-and two-family dwellings and townhouse construction statewide into the 2010 California Building Standards Codes. Fire sprinkler systems are also required in office buildings and multi-family dwellings (i.e. apartments).

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, include regulations for building standards (as also set forth in the California Building Code), and fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Local Regulations

Napa County Agricultural Commissioner's Office

The Napa County Agricultural Commissioner and staff are responsible for the implementation of federal, state, and local regulatory programs within Napa County. Specifically, these programs are designated to protect people and the environment and promote agriculture within Napa County. Agriculture in and around St. Helena uses a variety of hazardous materials, including fuels and maintenance fluids for farm equipment, fertilizers, and pesticides (including herbicides, fungicides, and insecticides).

Pesticides are regulated under the federal Insecticide, Fungicides and Rodenticide Act by the EPA. This includes labeling and registration of pesticides as to how they may be used. The EPA delegates pesticide enforcement activities in California to the California Department of Pesticide Regulation, under Title 3 of the California Code of Regulations and the California Food and Agriculture Code. The California Department of Pesticide

Regulation register pesticides for use in California, and licenses pesticide applicators and pilots, advisors, dealers, brokers, and businesses.

As stated above, the City of St. Helena's hazardous materials programs are administered and enforced by the Napa County Department of Environmental Management under the CUPA program.

Napa County Operational Area Hazard Management Plan

The City participated in the Napa County Operational Area Hazard Management Plan, which was adopted in 2013 and satisfies the requirements of the Disaster Mitigation Act of 2000. The plan includes a risk assessment that resulted in the profiling of hazards that pose risk to Napa County (including the incorporated cities), assessment of Napa County's vulnerability to those hazards, and examined the capabilities in place to mitigate them. Vulnerabilities identified, profiled, and analyzed in this plan include flooding, earthquakes, and wildland/urban interface fires. The plan also identifies goals for reducing risks from hazards. Objectives of the plan are to protect life and property; ensure emergency services; increase public awareness and understanding of hazard mitigation; protect critical facilities properties, infrastructure and other community assets from the impacts of hazards; and continue to strengthen communication and build on the collaborative success already achieved. In addition to county-wide risk assessment, the plan includes city-specific risk assessments.

Napa County Emergency Operations Plans

The Napa County's Concept of Operations Base Plans include the Napa County's Public Health Division Health and Human Services Agency Concept of Operations Base Plan; Crisis Emergency Risk Communication Plan, Strategic National Stockpile Plan, Countermeasure Distribution Plan, Outbreak/Epidemiologic Response Plan; Medical Surge Plan; Mass Care and Shelter Plan; Campus Response Plan; Local Assistance Center Plan; Excessive Heat emergencies Response Plan; Fatality Management Plan; and a Healthcare Evacuation Plan (Napa County 2019).

The Base Plans establish the Napa County Public Health Division Health and Human Services Agency's emergency organization, assigns task, specifies policies and general procedures, and provides for coordination of planning efforts using the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). The primary threats to Napa County include earthquakes, floods, landslides, fires, disease outbreaks, hazardous materials releases, transportation accidents, and national security incidents (Napa County 2019).

The Base Plans include a system of operations with scenarios and procedures in the event of an emergency. Each plan listed above provides detailed training guidance for staff and volunteers- including clear and concise roles and responsibilities within each department and organization; risk communication media and outreach goals, methods, and policies; public outreach, and public health division spokesperson to deliver approved information to the public during a crisis.

Napa County Draft 2019 Multi-Jurisdictional Hazard Mitigation Plan Update

Napa County, along with other jurisdictions, is planning to develop, but has not yet adopted, an update to the Napa County Operational Area Hazard Mitigation Plan of 2013.

Hazard mitigation is the use of long-term actions to reduce the loss of life, personal injury, and property damage that can result from a disaster. Planning efforts could include capital projects and other pragmatic activities that can mitigate the impacts of hazards. The draft 2019 Multi-Jurisdictional Hazard Mitigation Plan update would cover each of the major natural hazards that pose risks to Napa County infrastructure and residents.

The 2019 draft Multi-Jurisdictional Hazard Mitigation Plan update would include, at a minimum, the jurisdictions listed below. It is understood that Napa County also encompasses areas of land controlled by federal and state land management agencies including the California Department of Forest and Fire Protection, Bureau of Land Management, and Bureau of Reclamation. The following jurisdictions would meet Federal Emergency Management Agency guidelines and requirements as a formal participating agency, City of American Canyon, City of Calistoga, City of St. Helena, Town of Yountville, Napa County Flood Control and Water Conservation District, Napa County Office of Education, and Napa Valley College (Dynamic Planning and Science 2016).

The 2019 Multi-Jurisdictional Hazard Mitigation Plan update would include a comprehensive plan for flood damage reduction, additional mapping of properties which sustain repetitive losses due to flooding, and detailed inundation mapping technology. The plan would also include updated preparedness controls for wildfire mitigation, and earthquake mitigation.

City of St. Helena 1993 General Plan

The existing 1993 General Plan does not contain policies related to hazardous materials. However, it does contain the following implementing policies regarding emergency response included in the Public Health and Safety Element:

> **Policy 8.5.2**: Protect St. Helena residents from health and safety impacts related to the use, storage, manufacture or transport of hazardous materials.

Policy 8.5.6: Require all new development to meet the minimum fire flow rates specified by the City's Fire Code.

Policy 8.5.7: Ensure that all streets and roads are adequate in terms of width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide alternative emergency ingress and egress.

Policy 8.5.9: Review all new development proposals for their potential to introduce the production, use, storage, and/or transport of hazardous materials, and require reasonable controls on such hazardous materials

Policy 8.7.2: Maintain and periodically update the City's Emergency Response Plan.

Policy 8.7.3: Conduct periodic emergency response exercises to test the effectiveness of City emergency response procedures.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The 2019 General Plan contains the following policies regarding hazardous materials, emergency response and best practices included in the Public Health and Safety Element:

Policy PS4.3: Protect St. Helena residents from health and safety impacts related to the use, storage, manufacture, and transport of hazardous materials.

Policy PS4.4: Discourage new uses that rely extensively on the use of hazardous materials.

Policy PS4.5: Facilitate communication and education about fire safety, non-point source pollution, household hazardous waste disposal, and recycling opportunities.

Policy PS4.6: Ensure that all streets and roads are adequate in terms of width, turning radius, and grade in order to facilitate access by City firefighting apparatus, and to provide alternative emergency routes of ingress and egress.

Policy PS4.D: Require all new development to meet the minimum fire flow rates specified by the City's Fire Code.

St. Helena Municipal Code

Chapter 15.36 of the City's Municipal Code adopted the 2010 California Fire Code for all buildings and construction within the city. Chapter 2.64 aims to provide for the preparation and carrying out of plans for the protection of persons and property within the city in the event of an emergency; the direction of the emergency organization; and the coordination of the emergency

functions with all other public agencies, corporations, organizations, and affected private persons. This chapter also establishes responsibilities for carrying out the City's emergency plan, which the City has not yet adopted.

The St. Helena emergency council is responsible for the development of the City's emergency plan, which shall provide for the effective mobilization of all City resources, both public and private. The council is to meet any condition constituting a local emergency, state of emergency, or state of war emergency; and provides for the organization, powers and duties, services, and staff of the emergency organization. The plan takes effect upon adoption by resolution of the City Council.

3.8.4 Impacts

Methods of Analysis

The analysis of the potential public safety and hazardous materials impacts is based on information from the Phase I ESA prepared for the Proposed Project (Appendix G), a review of City planning documents, historical land use documents, regulatory agency literature/database review, and other existing documentation used to establish existing conditions and to identify potential environmental effects based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the Proposed Project would comply with all applicable state and local ordinances and regulations (summarized above).

As noted above, potential hazards and associated impacts related to hazards associated with flooding or a levee break and emergency procedures in the event of a flood are discussed in Section 3.9, Hydrology and Water Quality.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

- Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Threshold Criteria not Applicable to the Proposed Project

Due to the characteristics and location of the Proposed Project, certain criteria thresholds listed above are not applicable and therefore would not be considered potential impacts. These criteria are addressed below and not discussed further in this Environmental Impact Report (EIR).

Nearby Schools

The Project site is not located within one-quarter mile of an existing or proposed school. The closest schools to the Project site include Robert Louis Stevenson Middle School (0.67 miles west), St. Helena Montessori School (0.61 miles east), and St. Helena Elementary School (0.53 miles southwest). Because no existing or proposed school is within one-quarter mile of the Project site, and Proposed Project residences would not be expected to use or handle acutely hazardous materials, substances, or waste there would be no impacts and this issue (third significance threshold listed above) is not further evaluated.

Previously Listed Hazardous Site

As stated above, a Phase I ESA (Appendix G) was prepared for the Project site and included a search of databases pursuant to Government Code Section 65962.5. The Phase I ESA also included historic aerial photographs of the Project site to determine prior, un-documented land uses and the surrounding properties. The Proposed Project is not located on a site which is included on a list of hazardous materials and would therefore not create a significant hazard to the public or the environment. There would be no impact and this issue (fourth significance threshold listed above) is not further discussed.

Airports

The Project site is not located within an airport land use plan or within 2 miles of an airport. The closest airport to the Project site is the Angwin-Parrett Field airport located approximately 4.5 miles north-northeast of the site. Proposed Project residents would not be impacted by excessive noise from an airport and the Proposed Project does not include towers or other tall obstructions that could interfere with air travel. There would be no impact and this issue (fifth significance threshold listed above) is not further discussed.

Impacts and Mitigation Measures

3.8-1: Would the Proposed Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? This impact would be less than significant.

Construction

During construction activities, hazardous materials, such as petroleum (fuels, motor oil, lubricants), would be used for equipment. In general, small amounts of these materials would be on site at any one time. No acutely hazardous materials would be used during construction of the Proposed Project. In addition, materials handled would not pose a significant risk to off-site residents or construction workers because they would be used and stored in accordance with existing laws and regulations. Development of the Proposed Project would be subject to existing regulatory requirements for hazardous materials, including requirements under the National Pollutant Discharge Elimination System permit through the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), discussed in Section 3.9, Hydrology and Water Quality. The SWPPP would require implementation of control measures for hazardous material storage, soil stockpiles, inspections, maintenance, training of employees, and containment of releases to prevent contaminated runoff into nearby stormwater collection systems or waterways. Included within the SWPPP, best management practices would be required to contain hazardous materials and minimize the contact of hazardous materials with stormwater. As part of the SWPPP, spill prevention measures would be described for each chemical type and secondary containment of those chemicals would be used to ensure that spills can be managed and limited to the containment areas. Although not anticipated, if quantities of fuel or oil greater than or equal to 1,320 gallons are stored on the Project site during construction, then a Spill Prevention Control and Countermeasure Plan must be prepared in accordance with 40 CFR 112.

With the implementation of the SWPPP, and proper handling methods for each chemical type, impacts to the public or environment through the routing transport, use, and disposal of hazardous materials would be **less than significant.**

Operation

During Proposed Project operation, residents would be expected to use and store typical household hazards such as house paint, cleaning products, herbicides, and pesticides. The amounts of hazardous materials that residents store or use is negligible and not considered sufficient to create a significant safety hazard to the public, or otherwise pose a significant risk to human health or the environment. Napa County handles the disposal of household hazardous waste at their collection facility located at 889A Devlin Road in south Napa; approximately 30 miles south of the Project site.

Implementation of local hazardous materials programs and requirements as stated above, in addition to compliance with state and federal laws and regulations, would ensure that the Proposed Project would not create a significant hazard to the environment through routine transport, storage, use, and disposal of hazardous materials. Based on information provided above, this potential impact would be **less than significant.**

Mitigation Measures

None required.

3.8-2: Would the Proposed Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? This impact would be potentially significant.

Construction

During construction activities, hazardous materials such as solvents, petroleum (lubricants and fuels), and other typical construction equipment would be used. Amounts would be negligible and a hazardous spill plan would be implemented as part of the construction contractor's SWPPP (discussed under Impact 3.8-1, above). Best management practices would also be implemented as part of the SWPPP in order to reduce the likelihood of hazardous materials spills. Secondary containment containers would be used as part of storing fuels or hazardous materials on the Project site. In the event of a spill of hazardous materials, most, if not all, chemicals would be limited to the Project site or immediate vicinity as the amounts stored, used, or transported on the site would be minimal and unlikely to cause a significant impact on the public and environment. This impact is **less than significant.**

Due to the historic use of a portion of the site for agricultural uses, specifically an orchard in the late 1940s, there is a potential for contaminated soils to be encountered during construction activities. Potentially contaminated soils would include the past application of unregulated

pesticides. Prior agricultural activities may have used organochlorine pesticides (OCPs), such as DDT, toxaphene, dieldrin, etc., as well as arsenic in the form of arsenical herbicides, which has a history of use on many agricultural properties. Organochlorine pesticides were first introduced into California agriculture in 1944 and reached peak usage in the 1960s. In 1974, the use of the DDT was banned for agricultural purposes, and the elimination of remaining OCPs in California agriculture quickly followed. OCPs are biopersistent and bioaccumulate in the environment, whereas other types of pesticides have a short half-life (i.e., they degrade fairly quickly with time). Today, pesticides are required to demonstrate a lack of persistence in the environment considerably beyond their intended period of use in order to obtain EPA approval. Furthermore, when pesticides are used properly and in accordance with label specifications, potential impacts on the surrounding environment and receiving waters (surface water and groundwater) are minimized. Therefore, the primary concern from a human health perspective is the potential for residual levels of OCPs and/or arsenical herbicides which were in common use in the mid-1900s.

The Phase I ESA prepared for the Project site (Appendix G) concluded that the site is not subject to any recognized environmental concerns. Under ASTM Standard E1527-13, a recognized environmental concern means the presence or likely presence of hazardous substances or petroleum products in, on, or at a property, due to any release to the environment, under any conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment. The conclusion is based on an extensive review of regulatory agency records pertaining to the storage, use and/or potential release of hazardous materials, including pesticide use records from the Napa County Agricultural Commissioner's Office; as well as owner/operator interviews, site reconnaissance, and review of historical aerials and topographic maps. Regarding the potential for past use of OCPs, such as DDT, toxaphene, dieldrin, etc., the Phase I ESA concluded that it is unlikely that any significant concentrations would be present onsite, based on the fact that no agricultural chemicals have been stored or mixed onsite and because if such chemicals were historically used, they would have likely degraded to the point where their concentrations no longer pose a threat to human health or the environment. While the Phase I ESA concludes that it is unlikely that residual levels of pesticides would be present in significant concentrations, the absence of contaminants of concern such as OCPs and arsenic has not been confirmed through on-site soils testing. This is an issue of concern that was brought up in comments in response to Notice of Preparation. The impact to human health and the environmental from residual concentrations of OCPs and/or arsenic is considered a **potentially significant impact** because the Proposed Project includes sensitive receptors (residents), and because the finding of the Phase I ESA has not been confirmed through on-site soils testing.

In the event of a flood during construction, hazardous materials associated with construction activities may be released into flood waters and expose people or the environment to hazardous

conditions. However, as further discussed in Section 3.9, the Napa River levee has been designed to withstand a 200-year storm event. Due to the extreme volume of flood water associated with a 200-year storm event, the maximum amount of hazardous materials associated with the proposed construction activities that could be released would be negligible as compared to the amount of hazardous materials that would be transported under existing conditions. This is a considered a **less-than-significant impact.**

Operation

Future residents at the Project site would be bordered by agricultural uses to the north/northwest, existing residences to the south and east, and undeveloped land and a flood control levee along the Napa River to the north/northeast. Residences, as stated above, typically use small amounts of household hazardous wastes. The use of these types of household products would not be of a large enough quantity to result in a significant hazard to the public or the environment through the event of an accidental release.

As during construction, in the event of a flood, household hazardous materials from Proposed Project operation may be released into flood waters and expose people or the environment to hazardous materials. However, as further discussed in Section 3.9 of this EIR, the Project site is protected by a levee which was built to withstand a 200-year flooding event. Due to the extreme volume of flood water associated with a 200-year storm event, the maximum amount of hazardous materials associated with the proposed construction activities that could be released would be negligible as compared to the amount of hazardous materials that would be transported under existing conditions. This is considered a **less-than-significant impact.**

Mitigation Measures

Implementation of Mitigation Measure HAZ-1 would ensure that if soils located within the Project site contain pesticides that exceed CHHSLs for residential development and occupancy, such soils would be removed and/or remediated prior to any site disturbance or occupancy. With implementation of Mitigation Measure HAZ-1, a preliminary soil screening survey would ensure that soils on the Project site would comply with CHHHLs for residential development and occupancy ensuring the impact is mitigated to less than significant.

HAZ-1: As a condition of approval for construction and grading permits for the Project site, the Project applicant shall ensure the following subsurface soils testing and follow-up analysis shall be performed prior to obtaining a grading permit:

- A soils testing work plan shall be developed in accordance with DTSC's Interim Guidance for Sampling Agricultural Properties (DTSC 2008) by an appropriately licensed individual (i.e., professional geologist, environmental

engineer, or similar qualification) for the portions of the Project site historically used for agriculture. Special consideration shall be given to targeting site soils that are representative of historic agricultural use, and to avoid sampling recent fill material placed during levee construction. Prior to carrying out soils testing, the work plan shall be submitted to the Napa County Division of Environmental Health (as the Certified Unified Program Agency for all cities and areas of Napa County) and the City of St. Helena for review and approval.

- The number of soil samples, sampling methods, compounds tested, background samples (if applicable), and laboratory analyses shall be completed in accordance with DTSC's Interim Guidance. Should analytical results exceed naturally occurring concentrations or applicable CHHSLs, the health risks of such a condition shall be evaluated in human health risk assessment as described in DTSC standards and guidance (e.g., preliminary endangerment assessment guidance manual).
- The risk assessment shall describe measures that must be implemented to ensure potential health risks to construction workers, site residents, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than one in one million for carcinogens and a cumulative hazard index of 1 for non-carcinogens, or as required by the Napa County Division of Environmental Health acting as the Certified Unified Program Agency and/or DTSC oversight.
- In the event human health risk assessment shows elevated chemical concentrations pose a risk to human health or the environment, the risks shall be eliminated or substantially reduced by removal (e.g., excavation of soils and off-site disposal) or remediation of contaminated soils, and/or implementation of institutional controls and engineering controls (IC/EC). IC/EC may include use of a construction risk management plan, use of hardscape to cap problem areas, importation of clean soil in landscaped area to eliminate exposure pathways, and/or deed restrictions. If IC/EC are implemented, an Operations and Maintenance Program shall be prepared and implemented to ensure that the measures adopted are maintained throughout the life of the project.

The soil testing report, and if applicable, the human health risk assessment and Operations and Maintenance Program, shall be subject to review and approval by the City of St. Helena Department of Public Works, the Napa County Division of Environmental Health and/or other regulatory oversight agencies.

3.8-3: Would the Proposed Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? This impact would be less than significant.

Construction

Construction activities could physically interfere with an adopted emergency response or evacuation plan if it did not adhere to the requirements of such plans. The City currently does not have an adopted emergency evacuation plan and relies on the Napa County Emergency Operations Plans and the City's fire department to review site plans to ensure adequate access is provided in the event of an emergency. During construction activities in the event of a fire, hazardous spill, or other emergency access for emergency personnel and equipment as well as access for construction workers to evacuate the site would be available. The construction contractor would also implement the SWPPP, as discussed under Impact 3.8-1. The SWPPP would include an Integrated Contingency Plan and an evacuation plan for construction workers in the event of an emergency. The evacuation plan would be used in case of a fire, potential life threatening hazardous materials release, or any other emergency situation that has the potential to harm human life and safety. The evacuation plan would be prepared in accordance and oversight of City staff. Compliance with the SWPPP and the Integrated Contingency Plan would ensure impacts are **less than significant.**

Operation

The Proposed Project's tentative map is designed with three points of access; the extension of Star Avenue and Adams Street and an emergency vehicle access (see Figure 2-3 in Chapter 2, Project Description) to facilitate the ingress and egress of emergency response vehicles, including the City and County Fire Department's apparatus and Proposed Project residents. The City's Fire Department would review the site plans to determine if any additional road widening or access is recommended. The emergency vehicle access would be designed with bollards or a fence that would be kept locked. In the event of an emergency requiring evacuation, police or fire personnel/vehicles would have access to remove the bollards/unlock the gate through a locked box (e.g., knox box). Proposed Project operation would not interfere with the preparation of the City's emergency response plan or Napa County's Emergency Operations plan as it would be designed to comply with the California Building Code, as well as the 1993 General Plan and 2019 General Plan's community design standards; all of which include emergency response access features. The Community Design Element of the 1993 General Plan and 2019 General Plan include requirements for residential design to conform with the patterns and densities of neighboring areas, as well as accessibility for residents. The General Plans also include fire and hazardous materials guiding policies which require new development to meet the minimum fire flow rates specified by the City's Fire Code (Policy 8.5.6 in the 1993 General

Plan and Policy PS4.D in the 2019 General Plan), as well as ensuring all streets and roads are adequate in terms of width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide alternative emergency ingress and egress (Policy 8.5.7 in the 1993 General Plan and Policy PS4.D in the 2019 General Plan).

Compliance with City policies and regulations would ensure the Proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; therefore, the impact would be **less than significant**.

Mitigation Measures

None required.

3.8-4: Would the Proposed Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? This impact would be less than significant.

Construction

The Project site is bordered by residential development to the south and east. Irrigated agricultural land and undeveloped lands surround the Project site to the southwest, west, northwest, and directly north, with the exception of the Napa River which is north/northeast of the Project site. Across the Napa River, farther to the north, are additional irrigated agricultural lands. The Project site and the surrounding land uses are located within an area mapped as "Non-VHFHSZ" under the Local Responsibility Area map by CAL FIRE (CalFire 2019).

Construction activities have the potential to cause sparks which may cause a fire. As discussed under Impact 3.8-2, best management practices included within the recommended SWPPP would include precautions to temporarily remove vegetation in areas where construction equipment or vehicles would access, as well as have a water supply onsite for fire protection. As stated in Section 3.3, Air Quality, the Bay Area Air Quality Management District's Regulation 6, Rule 6 addresses the prohibition of fugitive road dust emissions associated with trucks tracking mud onto local roads "trackout." To comply with the Bay Area Air Quality Management District's regulations for fugitive dust and trackout, the Project site would be regularly watered for dust suppression during construction activities, which would serve a dual purpose in also reducing the risk for fires to occur. Impacts related to wildland fires during construction activities would be considered **less than significant**.

Operation

The Proposed Project's residences would be built to the California Building Code requirements for fire protection in place at the time. During Proposed Project operation sparks from vehicles is lowered because vehicles accessing the site would be on paved roads and adjacent landscape strips or yards would be set back from the road via a 4-foot-wide sidewalk. Also, the landscape strip and yards would be regularly irrigated during the dry summer and fall months so it is unlikely there would be access to dry grass where many wildfires start. Likewise, landscape equipment including lawnmowers and other common handheld power tools would be used on irrigated lawns and unlikely to be used on any dry grassy areas where sparks could initiate a wildfire.

As stated previously, the Proposed Project's tentative map is designed with an emergency vehicle access to facilitate the ingress and egress of emergency response vehicles, including the City and Napa County Fire Department's apparatus. The City's Fire Department would ensure the final site plans provide adequate emergency evacuation and would be consistent with the City's emergency response plan, when it is prepared. In the event of a fire, there would be sufficient access for emergency vehicles to reach the Project site, as well as emergency evacuation access for residents. The Napa County Emergency Operations Plan does not include a vehicle evacuation plan, but in the event of a wildfire, City fire and police personnel would coordinate with Napa County to identify evacuation routes and set up temporary shelters for anyone asked to evacuate. Because the Proposed Project would not conflict with the Napa County Emergency Operations Plan and provides adequate access in the event of a wildfire; the impact is **less than significant.**

Mitigation Measures

None required.

3.8.5 Cumulative Impacts

The cumulative context for the analysis of potential hazardous materials impacts (including hazardous materials usage during construction, exposure to potentially contaminated soils) is generally site-specific, rather than cumulative in nature. Compliance with all applicable federal, state, and local regulations related to hazards and hazardous materials on a project-by-project basis would be required for all projects within the City. Therefore, these issues are not addressed in the cumulative impact analysis.

Hazardous materials incidents or accidents would also typically be site-specific and would involve accidental spills or inadvertent releases. The effects of such incidents, then, would not be additive to effects from other, similar incidents occurring elsewhere. Associated health and

safety risks generally would be limited to those individuals using the materials or to persons in the immediate vicinity of the materials. Therefore, these issues are not addressed in the cumulative impact analysis.

The cumulative context for the use, handling, storage, and transport of hazardous materials is buildout of the City. This geographic scope is selected because (1) cumulative hazardous effects generally require proximity, and (2) City personnel are the first responders to hazardous accidents within the vicinity of the Project site.

3.8-5: Would the Proposed Project contribute to a cumulative increase in the potential exposure of people to sites where soil contamination could be present from past or current uses, or to hazards associated with the use and transport of hazardous materials? The Project's contribution would be less than considerable.

The Proposed Project, in conjunction with other past, present, and reasonably foreseeable future development within the City, could entail development of a site where past uses could have resulted in soil contamination, the potential exists for release of hazardous substances during construction. For individuals not involved in construction activities, the greatest potential source of exposure to contaminants would be airborne emissions, primarily through dust either from soil remediation activities or from soil-disturbing activities during construction where previously unidentified contamination may exist. (Other potential pathways, such as direct contact with contaminated soils or groundwater would not pose as great a risk to the public because such exposure scenarios are site-specific and would typically be confined to the construction zones.)

The City's 1993 General Plan determined that the routine use and transport of hazardous materials, hazardous materials use near schools, emergency response, and wildfire hazards would be a potentially significant impact due to development on former agricultural, commercial, or industrial properties and potential exposure to contaminants from historic hazardous materials use and release (City of St. Helena 2010). However, the City's 2019 General Plan Draft EIR (City of St. Helena 2018) was reviewed and it concluded that the routine use and transport of hazardous materials, hazardous materials use near schools, emergency response, and wildfire hazards were less than significant based on the implementation of existing and applicable laws and regulations. Potentially significant impacts included the development on former agricultural, commercial, or industrial properties which may expose construction workers and future occupants or neighboring residents from historical hazardous materials and release; and new developments could affect groundwater or surface water resources through the use and disposal of hazardous materials. These potentially significant impacts identified within the General Plans would be less than significant through compliance with General Plan policies.

The Proposed Project, in combination with other development projects in the City, would not result in any cumulative significant effects. This assumption is based on the results of the Phase I ESA that stated impacts related to past use of pesticides on the Project site associated with former agricultural activities are minimal and do not necessitate any corrective action. However, although unlikely to be found in high concentrations, in order to further quantify any potential pesticide amounts, an on-site soil testing would be required. Therefore, it is extremely unlikely that any one individual outside of any particular project site construction zone would be exposed to maximum levels of construction-generated contaminated air emissions (if any) for the entire development period, even if controls were not in place.

Therefore, compliance with applicable hazardous materials management laws and regulations adopted at the federal, state, and local level would ensure the Proposed Project's contribution to cumulative impacts related to soil contamination related to Proposed Project construction effects would not be considerable and the Proposed Project would not contribute to a cumulative impact resulting in a **less-than-significant impact**.

Mitigation Measures

None required.

3.8.6 References

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3.9 HYDROLOGY AND WATER QUALITY

3.9.1 Introduction

This section evaluates the potential effects on hydrology and water quality associated with development of the proposed Hunter Subdivision Project (Proposed Project), including mitigation measures recommended to avoid or minimize significant impacts where feasible. The information provided describes the hydrology and water quality conditions of the Project site and surrounding area, as well as the applicable federal, state, and local regulations pertaining to protection of hydrology and water quality.

Comments received from the public in response to the Notice of Preparation included concerns about pesticide runoff impacts to the Napa River, flood hazards (e.g., Federal Emergency Management Agency [FEMA] zones and/or levee failure) and impacts to groundwater supplies. These issues are all addressed in this section. A copy of the Notice of Preparation and comments received is included in Appendix A.

Information and analysis within this section is based on a review of site plans, City of St. Helena (City) planning documents, Napa County's Watershed Information & Conservation Council, as well as information from federal and state water resource agencies, including the FEMA, the U.S. Geological Survey, the California Department of Water Resources (DWR), the State Water Resources Control Board (SWRCB), and the San Francisco Regional Water Quality Control Board (RWQCB). In addition, this section is based in part on a groundwater basin analysis report for the Napa Valley Subbasin by Luhdorff & Scalmanni Consulting Engineers, a Hydrology Analysis for Hunter Subdivision, St. Helena, California, prepared for the Proposed Project by RSA Engineers and included as Appendix H, a Water Neutral Report included as Appendix J, and a peer-reviewed well capacity and sustainability analysis included as Appendix L.

3.9.2 Environmental Setting

This section describes the existing setting in the Project area and the built environment related to hydrology and water quality.

Regional Climate

Napa County has a Mediterranean climate with mild and relatively wet winters and dry warm summers. The average high temperature during the summer months (June through September) in Napa County ranges from 80ºF to 89ºF. Average low temperatures during the winter months (December through February) are 36ºF. The City has an annual rainfall of 34.61 inches (WRCC 2016). Snowfall in Napa County is common in some higher elevations, but the majority of precipitation falls as rainfall and any snow accumulation has a limited duration to a few days.

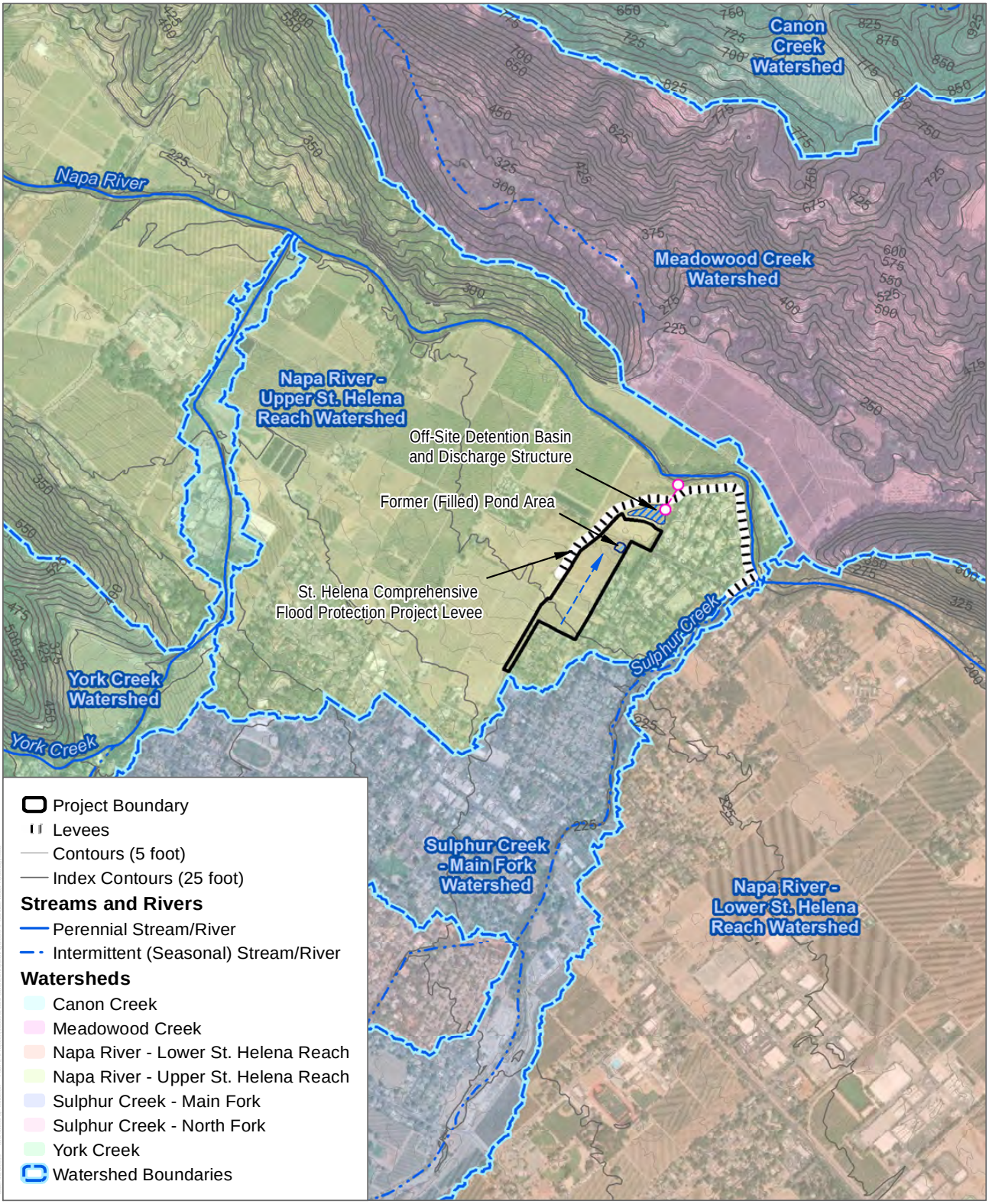
Watersheds and Hydrology

The Project site is located within the Napa River watershed. The watershed drains an area of approximately 426 square miles within Napa County and defines the western border of Napa County. The watershed's boundaries are marked by Mount St. Helena to the north (north of Calistoga); the Mayacamas Mountains to the west; Howell Mountain, Atlas Peak, and Mount George to the east; and the Napa-Sonoma Marsh to the south. The Napa River runs through the center of the watershed on the valley floor, draining numerous tributaries along a 55 mile stretch from the headwaters of Mt. St. Helena to the San Pablo Bay.

The northern edge of the Proposed Project site is located approximately 500 feet southwest of the Napa River, on a flat alluvial floodplain formed by the river and its tributaries. Important tributaries to the Napa River in the City include York Creek, which discharges into the Napa River approximately a one mile further upstream from the Project site, and Sulphur Creek, which discharges into the Napa River, approximately a quarter-mile further downstream. The County of Napa (County) has subdivided the Napa River watershed in numerous subwatersheds,[1] based on a high-resolution topography dataset completed in in 2002 (i.e., Light Detection and Ranging data processed by National Center for Airborne Laser mapping at UC Berkeley). These subwatersheds are shown in Figure 3.9-1, Surface Water Hydrology. The Proposed Project is located in the Napa River – Upper St. Helena Reach subwatershed, which is 1,985 acres in size and covers the portion of the Napa Valley floor northwest of the Pope Street bridge and south of the confluence of Canon Creek with the Napa River. Figure 3.9-1 also shows the Sulfur Creek and York Creek subwatersheds.

The Project site is relatively flat with a gentle slope towards its northwestern corner. As part of the City's Comprehensive Flood Protection Project (Flood Protection Project), described in more detail below), a levee was completed in 2011, just west and north of the Project site which separates the site and nearby residences from the Napa River (see Figure 3.9-1). Existing storm drainage infrastructure includes a detention basin on City-owned property adjacent to the northern boundary of the Project site, a bypass storm drain that routes stormwater collected in the City's conveyance system to a low-flow channel that discharges to the Napa River, and existing storm drains along Hunt Avenue and Del Rio Court. Based on existing topography shown on the Proposed Project's Tentative Map, drainage onsite occurs as sheet flow towards the north-northeast within the majority of the site, and to the northwest within the northern fifth of the site. Drainage is directed to a shallow swale at the northwestern corner of the site that connects to an offsite City detention basin.

[1] Napa County refers to the subdivision of the Napa Valley watershed as "basins." However, to avoid confusion with groundwater basins, these surface water basins are referred to herein as subwatersheds.



SOURCE: Bing Maps 2019, USGS 2019 (National Hydrography Dataset), City of St. Helena 2018

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0 500 1,000 Feet

FIGURE 3.9-1

Surface Water Hydrology

Hunter Subdivision Project

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The detention basin, which is on the inboard or southeastern side of the levee, is drained by a levee culvert that is designed, under low- to moderate-flow conditions, to discharge stormwater by gravity flow into the Napa River. During high flood events, the water level in the Napa River will rise to an elevation that prevents storm water from draining the residential area by gravity alone. During high flood elevation, the levee culvert gate is closed, routing stormwater into the detention basin. As water fills the basin, the pump station is activated and water is pumped from the basin into the Napa River. The pump station is equipped with a back-up diesel generator in case electricity fails during a storm event. The levee culvert and discharge structure is shown in Figure 3.9-1.

Flood Hazards

The Project site is located adjacent to the southside of the Napa River and just upstream of the confluence of the Napa River and Sulphur Creek. Numerous damaging floods have been recorded since 1862 on the Napa River. The 15 most recent serious floods along the Napa River occurred in 1942, 1943, 1955, 1962, 1963, 1965, 1967, 1973, 1978, 1982, 1983, 1986, 1995, 1997, 1998 and 2005. Prior to 2019, the last four major floods to affect the City's reach of the Napa River occurred in 1986, 1995, 1997, and 2005, with peak discharges estimated to be 20,000 cubic feet per second (cfs), 21,000 cfs, 16,000 cfs, and 18,000 cfs, respectively (City of St. Helena 2012). None of the floods in recent memory have reached the threshold for a 100-year flood event (Napa County 2013). During the December 2005 event, flood waters entered the Project site and backed up against a low cinder block wall on the north side of the road along Del Rio Court (the wall is oriented east to west). The peak water level for the Napa River in the portion that passes through the City reached 21.61 feet in 2005 and is estimated to have been a 25- to 50-year flood event (USGS 2006). More recently in February 2019, a flood event occurred where flood waters rose to just under one-foot of predicted levels. Flood waters were able to be contained and handled with improved Flood Control Projects along the Napa River within the City of Napa and St. Helena (Napa Valley Register 2019). The 2019 flood event recorded a discharge of 9,570 cfs and a river depth of 19.5 feet on the Napa River at the St. Helena gauge located roughly 150 feet downstream of the Pope Street bridge crossing (Napa County FCWCD 2019).

FEMA Special Flood Hazard Areas

Flood zones identified on FEMA Flood Insurance Rate Maps (FIRMs) are identified as a Special Flood Hazard Areas (SFHAs) and "other areas of flood hazard." A SFHA is defined as the area that would be inundated by a flood event having a 1% chance of being equaled or exceeded in any given year. The 1% annual-chance flood is also referred to as the base flood or 100-year flood, and is the national standard used by all federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development. "Regulatory floodways" are areas

within the SFHA that include the channel of a river/watercourse and adjacent land areas and are expected to have the deepest and highest velocity flooding. In an unobstructed condition, the regulatory floodway can discharge a 100-year flood/base flood without any increase in water surface elevations. The area outside the floodway, but still within the 100-year floodplain can be obstructed without increasing the base flood elevation by more than 1 foot at any point. FEMA considers “other areas of flood hazard” as including areas with a 0.2% annual chance of flooding (i.e., the 500-year flood zone), and areas with reduced risk due to a levee. SFHAs are considered high risk flood areas, whereas other areas of flood hazard are considered low- to moderate-risk areas.

St. Helena Comprehensive Flood Protection Project

After passage of Measure A in 1998, the City and the Napa County Flood Control and Water Conservation District initiated a joint study of potential flood protection projects for the City and nearby County areas. After much study, hydraulic analysis, environmental review, project redesign based on funding constraints, and public input, the scope and design of the City’s Flood Protection Project was defined. The Flood Protection Project encompassed a one mile stretch of the Napa River from Adams Street to Pope Street. The goal of the project was to remove a large portion of the northeastern part of the City from the SFHA, and to enhance the hydrology of the river by returning the floodplain to a more natural state. The project included the following:

- A new levee and floodwall
- A floodwater storage area referred to as Terrace B
- Removal of 17 homes
- Rerouting of drainage along Starr Avenue into a new storm drain outside the new levee
- A design standard that provides flood protection from a 200-year event

This Flood Protection Project included the area north of the Project site. The project was designed and supervised by a private sector and public agency qualified engineers. These included the City, U.S. Army Corps of Engineers, several engineering consultants, the County, and FEMA.

In December 2005, the City began the permit application process to implement the Flood Protection Project. While the permitting work was underway, the City submitted a Conditional Letter of Map Revision application to FEMA. A Conditional Letter of Map Revision is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway and the effective SFHA. It indicates whether the project, if built as proposed, would be

recognized by FEMA. In a letter from FEMA, dated November 2007, it was determined that the submitted data of the project used to create a FIRM for the project area was sufficient and met the minimum floodplain management criteria (FEMA 2012).

Subsequently, construction on the Flood Protection Project started in May 2009. The major structural components of the Flood Protection Project were completed in April 2011; the main levee is shown in Figure 3.9-2, FEMA Flood Hazard Zones. In December 2011, the City submitted an application for a Letter of Map Revision (LOMR) from FEMA. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway or the SFHA. A LOMR officially revises the FIRM or Flood Boundary and Floodway Map, and sometimes the Flood Insurance Study report, and when appropriate, includes a description of the modifications. Once a complete LOMR application is submitted, FEMA has 90 days to review the application and issue the LOMR. FEMA completed its review of the LOMR and officially revised the FIRM to remove the Project site from being within the SFHA. The effective date of the revised FIRM is November 5, 2012 (FEMA 2012).

On-Site Flood Hazards

As shown in Figure 3.9-2 and for the reasons described above, the Project site is not within a SFHA, but is mapped as being in an area with reduced flood risk due to a levee (FEMA 2012). The base flood elevation for the Napa River in the vicinity of the Project site is 220 feet above mean seal level (amsl), whereas the top of the levee is at least 222 feet amsl. The levee transitions to a flood wall adjacent to the Vineyard Valley mobile home park to the south/southeast of the Project site that provides for the same level of protection. The base flood elevation in the vicinity of the stream gauge used for measuring the discharge and height of the Napa River, which is located downstream of the Pope Street bridge, is 216 feet amsl (FEMA 2012; Napa County FCWCD 2019).

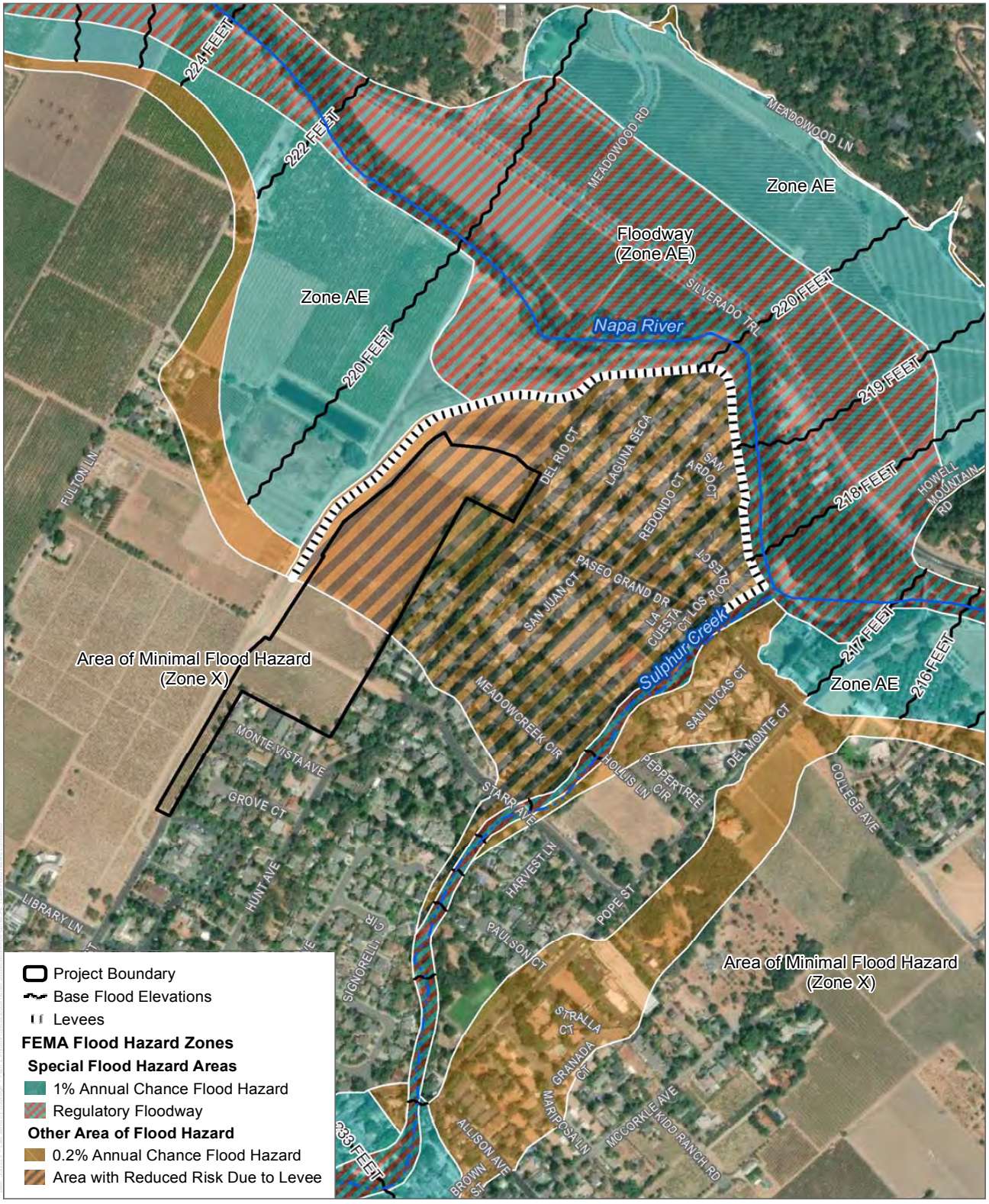
FEMA does not have a mapping category for a 200-year flood, but maps areas with a 0.2% annual chance of flooding (i.e., the 500-year flood zone) along with areas of reduced risk due to levee as “other areas of flood hazard.” By being within an area of reduced risk due to levee, the Project site is considered mapped within the 500-year flood zone (FEMA 2012). Based on the levee design, the Project site would be subject to a flood exceeding a 200-year recurrence interval, equivalent to less than a 0.5% annual chance. During such a flood, the style of flooding onsite would be slow and gradual, since the high velocity flows remain limited to the regulatory floodway. No portion of the Project site is located within the FEMA regulatory floodway. Since the FEMA FIRM has been officially revised through a LOMR, the Project site is not subject to any floodplain development restrictions (FEMA 2012).

Flooding Due to Levee Failure or 200-Year Flood Event

The Napa River is subject to significant floods, but the Project site is protected by a recently built levee that is designed to provide a 200-year level of flood protection. The Proposed Project does not include any element that exacerbates existing flood hazards for offsite properties or the general public (i.e., through floodplain encroachment that blocks or redirects flood flows, or by placing habitable structures in areas with a reasonable risk of flooding). Because the Project site is outside of a FEMA SFHA, no flood insurance would be required. However, because there remains residual risk of flooding from catastrophically large floods (such as a 500-year flood) or levee failures, residents in flood-prone areas, even if outside of a regulatory flood zone, have the option to purchase optional flood insurance (i.e., FEMA preferred risk policy).

When levees and floodwalls are used for flood protection, particularly when they protect land uses sensitive to flooding (e.g., residences), overtopping of the levee or floodwall is a source of public concern. The City's Flood Protection Project, specifically the levee and floodwall along the Napa River and Sulphur Creek, was constructed to provide protection from a 200-year flood event while maintaining an adequate amount of freeboard. The standard design level of protection is for the 100-year flood event; however, the 200-year design basis was implemented to provide an additional factor of safety and to account for potential settlement, changes in channel roughness, and potential channel aggradation. The elevated height of the levee and floodwall (i.e., a 200-year level of protection vs. a 100-year level of protection) along with the freeboard further reduces the potential for overtopping of the levee or floodwall during extreme flood events. The flood control system was also evaluated for stability during a seismic event and was found to be stable (Mead & Hunt, MBK Engineers, and Kleinfelder 2006).

The levee constructed as part of the Flood Protection Project was designed and constructed in accordance with all applicable U.S. Army Corps of Engineers Engineering Manuals and has been reviewed by FEMA. Geotechnical investigations and hydraulic analysis were performed to provide a basis for the design. The flood control facility design was prepared by the City's engineering team and stamped by the primary designer Mead & Hunt. Design considerations included the post- Proposed-Project channel hydraulics and stability. The flood control facilities are operated and maintained by the City in accordance with an operation and maintenance manual approved by FEMA, and in accordance with U.S. Army Corps of Engineers standards. This includes requirements for annual inspections and patrols during flood events. Specifically, levee maintenance consists of bi-annual (spring & fall) levee side mowing and levee embankment inspection prior to the rainy season, immediately following a high-water event, and at intervals not exceeding three months (City of St. Helena 2012). The purpose of the inspections are to verify that no unusual settlement or loss of material is occurring, that there are no areas of seepage or boils, that no animal burrows are encroaching upon the levee section, that toe drainage ditches are flowing properly, and that access roads are properly maintained and are graded to drain. Measure A, the local ½ cent flood protection sales tax, has established a fund dedicated to funding future maintenance.



SOURCE: Bing Maps 2019, FEMA 2012

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0 250 500 Feet

FIGURE 3.9-2

FEMA Flood Hazard Zones

Hunter Subdivision Project

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In addition, the same existing measures implemented to respond to flood emergencies within the region would continue to be used and would serve to provide residents with the means to avoid personal harm in the event of a catastrophic flood. This includes flood watches, advisories, and warnings from the National Weather Service, reporting by local news outlets, announcements and communications via Integrated Public Alert and Warning System, text alerts, and other means of communication that would be increasingly used in the event of a severe flood threat (Napa County 2013).

The Napa County Office of Emergency Services releases informational brochures and updates regarding flood preparedness throughout the year and prior to the rainy seasons. The County also has an application (NIXLE) for smartphones (android and apple) so residents within the County can download and receive emergency information during extreme weather events. The Napa Valley Regional Rainfall and Stream Monitoring System's website (https://napa.onerain.com/home.php) also has Napa County real-time rainfall and river-stream data available for the public to use during inclement weather. Updates are posted by the Napa County Flood Control and Water Conservation District through a serious of interactive web applications to show river and stream flow, and Napa River Flood Forecasts. During extreme weather, these applications and emergency resources, in addition to emergency broadcasts systems, are designed to give ample warning to residents and business owners of flood hazards and to help them prepare for evacuations.

When a flood hazard is imminent or occurring, the local police get involved in assisting with evacuations as necessary. Table 3.9-1 provides a reference for Napa River's flood stages along with the National Weather Service alerts that the National Weather Service field office releases to partner agencies and the press. The table is meant to illustrate the levels of warning received and the general types of alerts issued or actions taken. For reference, the 2019 flood approached, but did not exceed the moderate flood stage, and the 2005 flood approached, but did not exceed the major flood stage. Because every flood event is different, preparedness and response actions may differ, and are the responsibility of local, county and state offices of emergency management.

Table 3.9-1
Napa River Flood Stages at St. Helena (at Pope Street Bridge)

Flood Category	River Stage[1]	National Weather Service Alerts and/or County OES/Emergency Response Actions	Proposed Project Impact
Action / Monitor Stage	16 feet (207.71 feet amsl)	The Monterey field office of the National Weather Service may issue a Flood Watch-based products to cover Napa Valley regional flood potential at this stage. Advisory products released to the press.	None

Table 3.9-1
Napa River Flood Stages at St. Helena (at Pope Street Bridge)

Flood Category	River Stage[1]	National Weather Service Alerts and/or County OES/Emergency Response Actions	Proposed Project Impact
Minor	18 feet (209.71 feet amsl)	Minor flooding of low-lying agricultural areas along river begins. Low lying rural residential areas immediately adjacent to the river and some secondary roads affected. Voluntary evacuation orders are issued. Mandatory evacuations considered.	None
Moderate	20 feet (211.71 feet amsl)	Moderate flooding of the lower portions of Silverado Trail along the reach. Inundation of low-lying residential areas along the east river bank in the vicinity of Pope Street Bridge. Secondary and many primary roads inundated; most major cross roads inundated and unsafe to pass. Evacuation orders enforced and potentially expanded. Rescue operations initiated if necessary.	None
Major	22 feet (213.71 feet amsl)	Major flooding throughout the upper Napa Valley with many roads adjacent to Napa River inundated, making travel extremely difficult and unsafe. Evacuation, emergency response and rescue operations continue.	None
Catastrophic (100-Year Flood)	24.29 (216 feet amsl)	Places within FEMA SFHAs become inundated.	Residents advised/ordered to evacuate.
200+ Year Flood and/or levee failure	> 24.29 (218 feet amsl)	Evacuation, emergency response and rescue operations continue.	Property flood damage likely.

Sources: Napa County 2013, Napa County FCWCD 2019, NWS 2019.
Note: Elevation in feet (amsl)

The modern design and construction of the levee, along with the City's ongoing inspection and maintenance of the levee paid for through local sales taxes, substantially reduces its potential to fail in a 200-year flood or in the event of an earthquake. Furthermore, in highly unlikely catastrophic situations (< a 0.5% annual chance) where the levee may be overtopped or in a 200+ year flood event, Proposed Project residents would have ample warning to evacuate prior to flooding. Based on a comparison of the base flood elevation to proposed lot pad elevations, flooding of Proposed Project lots would range between 0 and 5 feet in depth, with the deepest flooding occurring on the northern part of the Project site. This level of flooding would leave upper floors or residences available for refuge. Because of this, the risks from a 200+ year flood and/or levee failure are limited to property damage rather than risk of life. As previously indicated, this would be an impact of the pre-existing environment on the Proposed Project rather than the Proposed Project's impact on the environment.

Finally, no portion of the Project site is located within an area that would be subject to flooding due to a dam failure. As shown in the St. Helena 2019 General Plan, Draft Environmental Impact Report (EIR), the northern portion of the Project site is mapped as being within the dam failure hazard zone for the Bell Canyon Dam (City of St. Helena 2018). However, the portion of this dam inundation

zone where the Project site is located is outdated. The dam inundation flood zone is less extensive than the former SFHA as it existed prior to completion of the Flood Protection Project. Therefore, the levee, which was designed to protect against a 200-year flood, would also protect the site against the threat of inundation from failure of the Bell Canyon Dam.

Sea Level Rise, Tsunami Inundation, and Seiche

The Project site is not subject to sea level rise, tsunami inundation and/or seiche wave. The preconditions necessary for a project to be at risk of such hazards is that it be located within a reasonable distance and elevation relative to a coastline (for sea level rise or seiche) or large body of water (for seiche waves). The Project site is located over 200 feet amsl in elevation and not next to a large water body subject to seiche.

Groundwater Resources

Groundwater Basin Status

The Project site is located within the Napa Valley Subbasin (DWR Basin No. 2-002.01, Subbasin) of the Napa-Sonoma Valley Groundwater Basin as designated by the State DWR (DWR 2019a). Napa County further subdivides the Subbasin into groundwater subareas. The Project site is located within the Napa Valley Floor St. Helena subarea (LSCE 2016). In accordance with eight components in the California Water Code Section 10933(b), DWR is required to prioritize[2] all of the groundwater basins across California in order to determine which provisions of the California Sustainable Groundwater Management Act (SGMA) apply to the basins. The latest phase of DWR's basin re-prioritization (completed in December 2019) the Napa Valley Subbasin was changed from a medium to a high priority ranking (DWR 2019a). The increase in priority designation for the Napa Valley Subbasin in 2019 was due primarily to revised projections of future population for the Subbasin, an increased assessment of the total number of wells, and a revised approach to evaluating water quality in the Subbasin compared to the previous prioritization analysis performed in 2014. The change from medium priority to high priority does not affect applicable SGMA requirements for the Napa Valley Subbasin.

An extensive analysis of the groundwater Subbasin associated with compliance with SGMA (discussed further below) examined basin conditions, established sustainability goals, and developed minimum thresholds and measurable objectives necessary to track progress towards those goals. One of the central components of SGMA is the definition of six groundwater sustainability indicators, that if found to be causing significant and unreasonable effects throughout the Subbasin, would indicate that the basin is not being managed sustainably. The

[2] DWR's priority rating is based on estimates of population density, anticipated growth, well density, the amount of irrigated agriculture, the degree to which water demands are met from wells (versus surface water), and the existence of documented impacts (e.g., overdraft) (DWR 2014).

sustainability indicators are (1) chronic lowering of groundwater levels, (2) reduction in groundwater storage, (3) seawater intrusion, (4) degraded water quality, (5) land subsidence, and (6) depletions of interconnected surface water.

Based on an extensive analysis of historical monitoring data on groundwater levels, groundwater in storage, groundwater quality, and interconnections between groundwater and surface water, there have been no basin-wide significant and unreasonable effects with regard to chronic lowering of groundwater levels, reduction in groundwater storage, seawater intrusion, degraded water quality, and land subsidence (LSCE 2016). The basin analysis report found that groundwater levels in the Napa Valley have been stable over the hydrologic base period (1988-2015), and the prior historical period where data are available, with recognition that groundwater levels in some areas have been lower during dry water year types (LSCE 2016). A sustainable yield analysis was conducted which established that the maximum amount of water that can be withdrawn annually from the Subbasin groundwater supply without causing an undesirable result ranges between 17,000 and 20,000 acre-feet per year (AFY) (LSCE 2016). From 1988 through 2018, the cumulative annual storage changes in the Napa Valley Subbasin were 4,388 acre-feet, reflecting a basin in balance and the absence of long-term depletions of groundwater storage within the Subbasin (LSCE 2021). The 2020 annual report updated the total amount in storage of the Napa Valley Subbasin to 196,651 acre-feet which is a decrease from the year prior due to a very dry year; however, the report concluded that the basin continues to be managed sustainably despite the most recent fluctuation (LSCE 2021).

Overall, the groundwater table in the alluvial aquifer of the Subbasin is quite shallow; groundwater elevations in the center of the valley fluctuate seasonally approximately 10 to 25 feet, and near the edge of the valley fluctuate approximately 25 to 35 feet (LCSE 2016). The basin analysis report found that the magnitude of the surface water components, particularly inflows from uplands runoff and surface water outflow as well as groundwater baseflow, demonstrate that large quantities of water move through the Subbasin in most years as compared to the amounts of water pumped from the Subbasin or flowing out of the Subbasin as subsurface outflow (LCSE 2016). As a result, sustainability indicators have been set to provide minimum thresholds and measurable objectives for a number of indicator wells throughout the basin with the purpose of maintaining existing conditions with regard to sustainability of the Subbasin. These groundwater level thresholds are also used as measures to provide protection of other undesirable results defined by SGMA.

Napa County releases annual reports that provide an update on basin conditions and makes recommendations necessary to continue to maintain and improve sustainable management. The most recent annual report finds that most of the groundwater levels in the wells measured have remained above minimum thresholds, however seven wells did record groundwater levels below their minimum thresholds including a well near the Project site (see discussion below).

However, these thresholds are monitored for evidence of chronic declines and not necessarily as an isolated exceedance, as the annual report still determined that the Subbasin has continued to be managed sustainably through 2020 (LSCE 2021).

Local Groundwater Uses and Users

The Project site contains an inactive groundwater well adjacent to proposed Lot 19 in the northern portion of the property identified as Parcel B (see Figure 2-4, Proposed Tentative Map, in Chapter 2, Project Description). This well may have been historically used to provide construction water for the earth moving activities associated with the City's Flood Protection Project and may have been used in the past for agricultural irrigation. The existing condition of the well is considered inactive; however, as it was not being used at the time the Notice of Preparation was released. The Phase I Environmental Site Assessment completed for the Proposed Project noted that the well was inoperable at the time of the site visit (Appendix G).

Table 3.9-2 shows well completion report records available for each township and range section that intersects the Project site, including information on the number and type of wells with records, and their average depth (and range of depths). The well types predominantly consist of domestic and irrigation supply wells but include several municipal/public supply wells. Table 3.9-2 shows that average well depths for domestic wells tend to be shallower than irrigation and municipal supply wells; this tendency exists because agricultural and especially municipal supply wells require higher yields. The locations of well completion reports are shown in Figure 3.9-3, Napa Valley Groundwater Subbasin, although many well records exist which have not yet been mapped by DWR, or only been mapped to the centroid of the township and range section within which the well is located. Furthermore, the existence of a well completion report does not indicate whether or not the well is currently active.

Based on review of the well completion report records, there are numerous domestic and irrigation wells located on the northeastern side of the Napa River, as well to the north and west of the Project site whose locations are not shown in Figure 3.9-3 (DWR 2019b). The primary municipal use of groundwater is for the City, which occurs from two wells on the south side of Stonebridge Park (Stonebridge Complex wells) completed at depths of 410 and 670 feet below ground surface (bgs) (Figure 3.9-3). As opposed to rural residential and agricultural uses, who draw from wells distributed throughout the Subbasin, the groundwater portion of the urban water demand for the City's whole water service area is drawn from the two City wells at the Stonebridge Complex.

Table 3.9-2
Well Completion Report Records on the Project Site and Vicinity

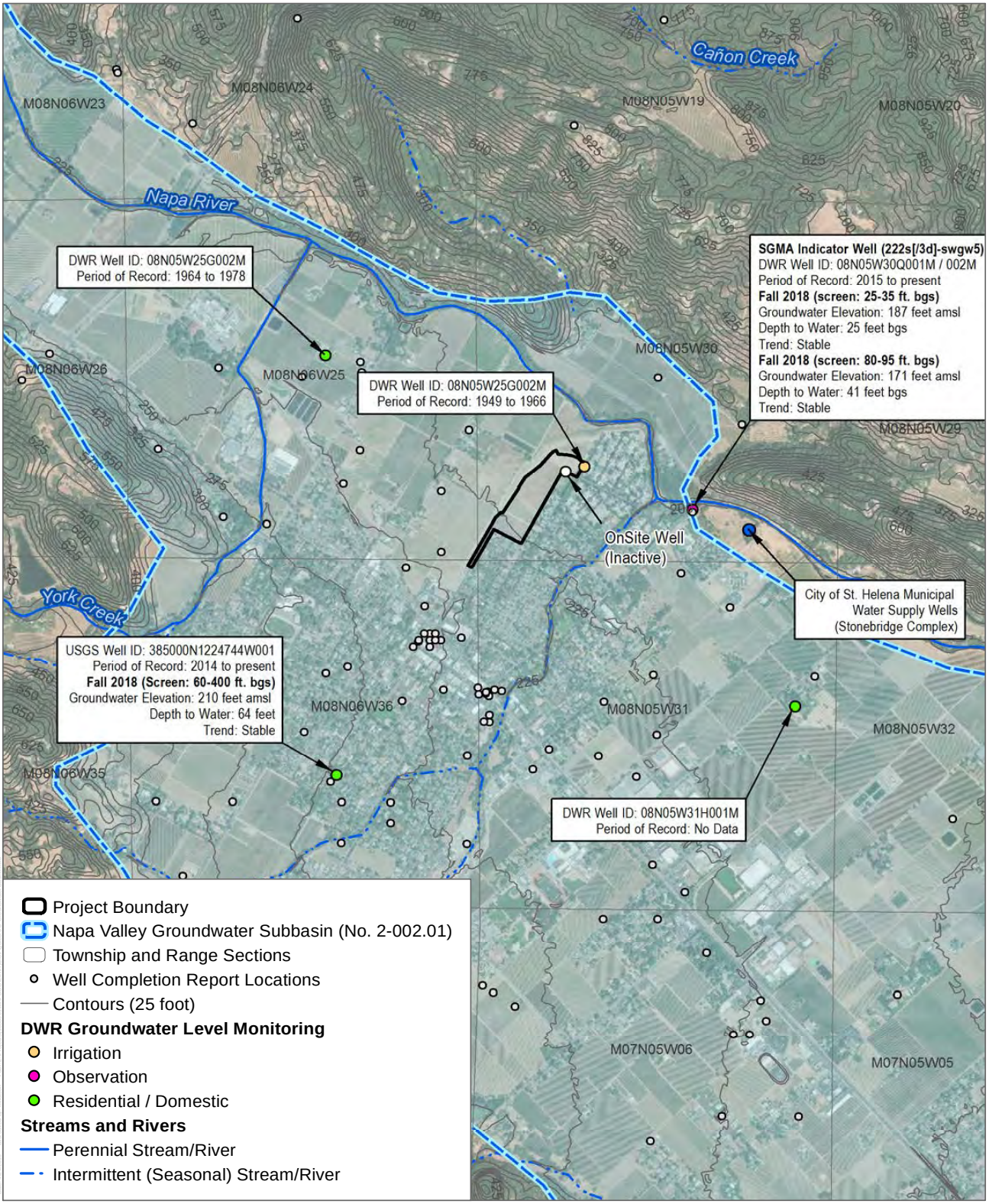
Township & Range Section	Domestic Well Count	Average Well Depth, in Feet (Range)	Production / Irrigation Well Count	Average Well Depth, in Feet (Range)	Municipal / Public Well Count	Average Well Depth, in Feet (Range)	Average Well Yield, in GPM (Range)[1]
T08NR06W25	19	280 (120 – 460)	18	390 (160 – 780)	2	670 (560 – 780)	96 (7- 500)
T08NR05W30	18	351 (100 – 860)	14	376 (247 – 580)	2	360 (285 – 435)	147 (8 – 1,000)
T08NR05W31	12	307 (165 – 450)	23	423 (195 – 820)	5	437 (232 – 600)	68 (10 – 250)
T08NR06W36	26	349 (120 – 780)	34	367 (55 – 610)	0	N/A	39 (2 – 250)

Source: DWR 2019a.
Notes: GPM = gallons per minute
[1] Well yields are only reported for a subset of well completion reports in the database, and all types of wells (i.e., domestic, agricultural and municipal wells). Actual yield depends on well construction details, well use/purpose, and pumping equipment installed at the time of well log submittal.

Local Groundwater Levels

DWR well completion reports and the DWR SGMA data viewer were reviewed for groundwater level information pertaining to the Project site and its vicinity (DWR 2019b-c). Groundwater level monitoring sites are shown in Figure 3.9-3, and includes two locations where groundwater levels are currently monitored, including a dual-completion monitoring well near the Pope Street crossing of the Napa River (Well ID 222s-swgw5 and 223d-swgw5), and a well on the southern side of the City (DWR 2021). Other monitoring sites have historical data or no data. The dual-completion monitoring well is one of the many representative monitoring sites throughout the Subbasin that are used to track compliance with minimum thresholds and measurable objective established under SGMA.

The Project site's proximity to the Napa River means that groundwater levels on-site are likely to be relatively shallow but may seasonally lower during the late summer and fall. Groundwater levels measured in the shallow screen of a dual-completion monitoring well (Napa River at Pope Street) have fluctuated between 18 and 25 feet bgs between 2015 and 2020 (shallow screen). The latest available groundwater level reading in Spring 2020 was 20 feet bgs (192 feet amsl) for the shallow screen and 24 feet bgs (188 feet amsl) for the deep screen (DWR 2021). However, the Fall 2020 groundwater level measurement was 61 feet bgs (156 feet amsl) which is below the threshold of 164 amsl. These groundwater levels reflect seasonal peaks and also indicate that 2020 was a very dry year, but generally the seasonal highs and lows have remained fairly stable throughout the well's period of record (2015 to 2020). Based on the groundwater contour maps prepared for the 2020 annual groundwater report, the direction of groundwater flow in the vicinity of the City is to the east and south, to varying degrees based on the time of year (LSCE 2021).



SOURCE: Bing Maps 2019, USGS 2019 (National Hydrography Dataset), DWR 2019

DUDEK

0 900 1,800 Feet

FIGURE 3.9-3

Napa Valley Groundwater Subbasin

Hunter Subdivision Project

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The Subbasin monitoring well may be within the pumping influence zone of the Stonebridge Complex wells, which supplies the entire City with up to 20% of its water demand in average years, and up to 30% in dry years (City of St. Helena 2018). Between 2006 and 2019, annual groundwater pumping at these two wells has averaged 350 AFY, ranging from a low of 182 acre-feet in 2012 to a high of 526 acre-feet in 2013 (LSCE 2016, 2020). As shown in Figure 3.9-3, the City's Stonebridge Complex is located approximately 0.5 miles southwest of the Proposed Project's on-site well, and approximately 600 feet from the Subbasin monitoring well.

Given the proximity and similar setting, groundwater levels are expected to be similar or possibly shallower beneath the Project site. According to the findings of the well capacity and sustainability report (Appendix L), the existing agricultural well on the site (proposed to be located in Parcel B on the tentative map) was constructed in 1976 to a depth of 410 feet bgs; with a yield of 350 gallons per minute (gpm). The screened portions of the well are from 80 feet bgs to the total depth of the well at 410 feet bgs. Groundwater was first encountered during drilling for the initial installation of the well at a depth of 24 feet bgs (Appendix L). At the time of the recent well capacity and sustainability test for the onsite well, the groundwater level was at 22 feet bgs. It is anticipated this well would be used to irrigate all on-site (public and private) landscape areas, which includes the existing vineyard in the panhandle portion of the site, lawns, and sidewalk planting strips.

Water Quality

Water quality in surface and groundwater bodies is regulated by the SWRCB and RWQCBs. The Project site is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (San Francisco RWQCB), which is responsible for the implementation of state and federal water quality protection statutes, regulations, and policies in the vicinity of the Project site. The San Francisco RWQCB implements the Water Quality Control Plan (Basin Plan), a master policy document for managing water quality in the region (San Francisco RWQCB 2017).

As previously mentioned, runoff from the Project site would be directed to the off-site detention basin adjacent to the Napa River. Therefore, under normal circumstances, runoff from the Proposed Project would either be lost to evaporation or percolate into the underlying groundwater table. Under extreme flood scenarios, surface water would be discharged to the Napa River once the capacity of the City's off-site detention basin is reached. Therefore, the receiving waters for the purpose of water quality consist of both groundwater and the Napa River.

Surface Water Quality

The water quality of the Napa River is highly variable and changes significantly depending on the specific reach of the river, the time of year, and the level of flow existing at any one time.

General water quality indicators (e.g., pH, DO, temperature, specific conductance) within the Napa River generally decline as flows recede in late summer, and reach seasonal lows just before the first rains of the season. On April 6, 2018, the U.S. Environmental Protection Agency (EPA) approved California's 2014–2016 List of Impaired Waters which replaces the previous 2012 California Clean Water Act (CWA) Section 303(d) List as California's current 303(d) List (SWRCB 2019). The Napa River is included on the CWA Section 303(d) list of water quality limited segments due to impairment[3] from nutrients, pathogens, and sedimentation/siltation, further discussed below under "Regulatory Setting" (SWRCB 2019).

Total Maximum Daily Load (TMDL)[4] allocations have been developed for sediment and pathogens, but development of a TMDL for nutrients is in progress. The sediment and pathogen TMDLs has been completed by the San Francisco RWQCB and the TMDLs have been incorporated into the Basin Plan as an amendment (San Francisco Bay RWQCB 2017). The Basin Plan amendment includes water quality targets for pathogen indicators Escherichia coli (E. coli), fecal coliform, and total coliform, as well as density-based (load) limits for these pathogen indicators. The most common sources of pathogens are wastes from warm-blooded animals, including humans, livestock, domestic pets, and wildlife. Different types of land use have different run-off concentrations of nutrients, organic matter, and bacteria. Predominant land uses include agriculture, residential, commercial, industrial, mixed (variety of land uses), transportation, open space, forest, and wetlands; the loadings from agricultural activity are likely the most dominant. The Basin Plan amendment also includes waste load allocations for individual municipal dischargers including on-site sewage disposal systems, sanitary sewer systems, municipal stormwater runoff, grazing lands, and confined animal feeding operations (San Francisco Bay RWQCB 2017).

The San Francisco RWQCB also adopted a Basin Plan amendment incorporating a TMDL for sediment and a Habitat Enhancement Plan for the Napa River. The amendment includes numeric targets for spawning gravel permeability and streambed scour. The TMDL also includes load allocations (for non-point sources) for land areas upstream and downstream of dams, in addition to waste load allocations for urban runoff and wastewater discharges. This Basin Plan amendment was approved in November 2009. The Basin Plan finds that more than half of the sediment loads in the Napa River are from human processes, which include road construction, surface erosion from agricultural lands, and the hydromodification impacts of urban stormwater runoff (San Francisco Bay RWQCB 2017).

[3] Being impaired (also known as "water quality-limited") means that a water body is "not reasonably expected to attain or maintain water quality standards" without additional regulation.

[4] A TMDL specifies the maximum amount of a pollutant a water body can receive and still meet water quality standards.

In addition to the above, the City is subject to the TMDL for diazinon and pesticide-related toxicity applicable to all San Francisco Bay Area urban creeks, which was incorporated as a Basin Plan amendment in 2005 (San Francisco Bay RWQCB 2017). The TMDL imposes toxicity targets for urban creek water and sediment, and a diazinon concentration target for urban creeks. TMDL targets shall be achieved through regulatory programs, education and outreach, and research and monitoring. The TMDL attainment strategy will primarily focus on integrated pest management and the use of less toxic pest control methods. The EPA phased out urban diazinon applications at the end of 2004; however, replacements for diazinon (such as pyrethroids) may now pose potential water quality and sediment concerns.

The adopted TMDLs discussed above contain water quality standards in the form of waste load allocations that quantify the amount of pollutants that may be discharged into an impaired water body from various contributing sources, in addition to water quality objectives for receiving waters. This includes water quality standards for urban runoff (and wastewater discharges) with which the City must comply. One strategy used by local urban runoff management programs to move toward achieving TMDL standards is to identify the sources of TMDL pollutants in urban runoff and then to implement control measure programs for these pollutants.

In the urban parts of the City, potential contaminants of concern could include motor oil and other contaminants from vehicle parking on streets and driveways, as well as pesticides and fertilizers from vineyards and residential landscaping. Stormwater from the Project vicinity that does not percolate into the ground is collected within the City's storm drainage system and ultimately discharged into the Napa River. There are records of the use of agricultural pesticides at the Project site that have been applied to the vineyard. Records obtained from the Napa County Agricultural Commissioner's Office include the use of herbicides, fungicides and miticides (Appendix G). According to the aerial photograph review in Appendix G, the property was the site of an orchard in the 1940s which was removed by 1968. By 1973, vineyard cultivation appears in the southwest part of the site. When used properly in accordance to product labels, pesticides degrade with time and repeated irrigation and are minimally applied only where necessary. Nevertheless, the potential exists for residual contaminants within surface soils to become suspended and carried in stormwater runoff, and those contaminants can affect receiving waters and areas downstream.

Groundwater Quality

The Basin Plan establishes beneficial water uses for groundwater basins within the region. The Napa Valley groundwater subbasin underlies the Project site and is listed in the Basin Plan as providing the beneficial uses of municipal and domestic water supply (MUN), industrial process water supply, industrial service water supply (IND), and agricultural water supply (AG).

Groundwater quality throughout most of the Napa Valley region is generally suitable for most urban and agricultural uses, with only local impairments occurring. The primary constituents of concern are total dissolved solids, nitrate, boron, and organic compounds. The City's groundwater source (Stonebridge Complex wells) is treated to remove iron and manganese and are chlorinated prior to entering the City's distribution system.

The SGMA Basin Analysis Report completed by Napa County provides the following summary of groundwater quality conditions occurring throughout the Subbasin (LSCE 2016):

> Groundwater quality records from representative monitoring sites provide information on important constituents whose concentrations influence the quality of water for irrigation and human consumption. Despite a typical lack of historical groundwater quality records in Napa County, available data suggest that groundwater is generally of good quality throughout most subareas. Poor groundwater quality does, however, exist in the south and the north-central parts of the County. The poor groundwater quality includes concentrations of naturally occurring metals such as arsenic, iron, and manganese that exceed drinking water standards throughout the county. Naturally occurring elevated levels of boron are also prevalent in most subareas. Subareas south of the Napa Valley Floor, such as the Carneros and Napa River Marshes, have poor quality water due to naturally elevated levels of salinity and chloride. The Calistoga Subarea of the Napa Valley Floor also has poor quality water in many wells due to hydrothermal conditions resulting in higher concentrations of metals. Nitrate concentrations are not a concern throughout the county, but tend to be somewhat higher in agricultural areas in the Napa Valley Floor.

Water quality standard exceedances in the Subbasin were limited to the naturally occurring constituent arsenic, with 4 of 26 sites showing maximum concentrations above the arsenic maximum contaminant level of 10 µg/L, including one site within the St. Helena subarea (LSCE 2016). The groundwater quality testing attached to the Proposed Project's on-site well completion report indicated elevated levels of iron and manganese (DWR 1992). The City's two active groundwater wells are treated to maintain Title 22 standards, including chlorination prior to entering the City's distribution system (City of St. Helena 2018). Potable water supply is discussed in more detail in Section 3.13, Utilities and Service Systems.

3.9.3 Regulatory Setting

The regulatory framework related to hydrology and water quality is extensive, because it addresses issues related to the environment (i.e., maintaining high quality waters for water-dependent species and activities), public health (e.g., ensuring adequate drinking water quality),

and public safety (e.g., avoiding flood damage). Impacts pertaining to provision of potable and non-potable water supplies, including applicable regulations, are addressed in Section 3.13, Utilities and Service Systems.

Federal Regulations

Clean Water Act

The CWA (33 USC 1251 et seq.), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Important sections of the act are as follows:

- CWA Sections 303 and 304 provide for water quality standards, criteria, and guidelines. Under Section 303(d) of the CWA, the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. California is required to establish TMDLs for each pollutant/stressor. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The impairments applicable to the Proposed Project's receiving waters are described in Section 3.9.2 (Water Quality).
- CWA Section 401 (Water Quality Certification) requires an applicant for any federal permit that proposes an activity which may result in a discharge to waters of the United States, to obtain certification from the state that the discharge will comply with other provisions of the act. The Project site does contain potentially jurisdictional wetlands, and this issue is addressed in Section 3.4 (Biological Resources).
- CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the SWRCB and the nine RWQCBs, who have several programs that implement individual and general permits related to construction activities, stormwater runoff quality, and various kinds of non-stormwater discharges. The City operated under the Small Municipal Separate Storm Sewer (MS4) Permit from the SWRCB and all projects in the City are required to comply with the MS4 Permit requirement that address stormwater runoff discharges to a water of the United States (i.e., the Napa River and the northern San Francisco Bay).
- CWA Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is jointly administered by the U.S. Army Corps of Engineers and the EPA. The Project site does contain potentially jurisdictional wetlands, as addressed in Section 3.4 (Biological Resources).

Numerous agencies have responsibilities for administration and enforcement of the CWA. At the federal level this includes the EPA, the U.S. Army Corps of Engineers, the Bureau of Reclamation, and the major federal land management agencies such as the U.S. Forest Service and the Bureau of Land Management. At the state level, with the exception of tribal lands, the California EPA and its sub-agencies, including the SWRCB, have been delegated primary responsibility for administering and enforcing the CWA in California.

Federal Antidegradation Policy

The federal antidegradation policy is designed to protect water quality and water resources. The policy directs states to adopt a statewide policy that includes the following primary provisions: (1) existing instream uses and the water quality necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program to provide flood insurance within communities that were willing to adopt floodplain management programs to mitigate future flood losses. The National Flood Insurance Act also required the identification of all floodplain areas within the United States, and the establishment of flood-risk zones within those areas. FEMA is the primary agency responsible for administering programs and coordinating with communities to establish effective floodplain management standards. FEMA is responsible for preparing FIRMs that delineate the areas of known special flood hazards and their risk applicable to the community. The program encourages the adoption and enforcement by local communities of floodplain management ordinances that reduce flood risks. In support of the program, FEMA identifies flood hazard areas throughout the United States on FEMA flood hazard boundary maps.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter–Cologne Act (codified in the California Water Code, Section 13000 et seq.) is the primary water quality control law for California. Whereas the CWA applies to all waters of the United States, the Porter–Cologne Act applies to waters of the state, which includes isolated wetlands and groundwater in addition to federal waters. It is implemented by the SWRCB and

the nine RWQCBs. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state[5] could cause pollution or nuisance, including impacts to public health and the environment.

The act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. California Water Code Section 13260 subdivision (a) requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system that could affect the quality of the waters of the state, to file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (waters of the United States), an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as groundwater and isolated wetlands), Waste Discharge Requirements (WDRs) are required and are issued exclusively under state law. WDRs typically require many of the same best management practices (BMPs) and pollution control technologies as required by NPDES-derived permits.

Water Quality Control Plan for the San Francisco Bay Basin

The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement Basin Plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The San Francisco Bay RWQCB is responsible for the protection of the beneficial uses of waters draining to the San Francisco Bay, including the Project site. The Water Quality Control Plan for the San Francisco Bay Basin (Region 2) (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code Sections 13240–13247) (San Francisco Bay RWQCB 2017).

General NPDES Permits and WDRs

To enable efficient permitting under both the CWA and the Porter–Cologne Act, the SWRCB and the RWQCBs run permit programs that group similar types of activities that have similar threats to water quality. These "general permit" programs include the Phase II Small MS4 Permit, the construction general permit, the industrial general permit and other general permits for low-threat discharges. The construction stormwater program, the small MS4 permit program,

[5] "Waters of the state" are defined in the Porter–Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050(e)).

and the general permit for low-threat discharges are administered by the SWRCB, while other general WDRs are administered by the San Francisco Bay RWQCB. Table 3.9-3 lists the water-quality-related permits that would apply to the Proposed Project, each of which is further described below. General WDRs and/or NPDES permits contain effluent limitations that may be stricter than basin-wide water quality objectives, because they regulate specific categories of discharge and are designed to limit the cumulative effects of development over broad areas.

Table 3.9-3
State and Regional Water Quality-Related Permits and Approvals

Program/Activity	Order Number/ NPDES Number	Permit Name	Affected Area
Construction stormwater program	2009-0009-DWQ/ CAS000002, as amended	NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)	Statewide
Phase II Small MS4 Program	SWRCB Water Quality Order 2013-0001-DWQ/ CAS000004, as amended	Waste Discharge Requirements for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (Small MS4 Permit)	All Regulated Small MS4 systems; New Development and Redevelopment Projects within the City of St. Helena.
Temporary/low volume dewatering[1]	SWRCB Water Quality Order 2003-0003-DWQ	Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality	Statewide

Notes: NPDES = National Pollutant Discharge Elimination System; MS4 = municipal separate storm sewer system; WDR = Waste Discharge Requirement
[1] If any dewatering is required.
Source: Appendix H.

Construction General Permit (SWRCB Order 2009-0009-DWQ, as amended)

For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) to avoid and minimize water quality impacts attributable to such activities. The Construction General Permit applies to all projects in which construction activity disturbs 1 acre or more of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would include and specify water quality BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. Routine inspection of all BMPs is required under the provisions of the Construction General Permit, and the SWPPP must be prepared and implemented by qualified individuals as defined by the SWRCB. The Proposed

Project applicant must submit a Notice of Intent to the SWRCB to be covered by a NPDES permit and prepare the SWPPP prior to the beginning of construction.

Various levels of soil disturbances associated with Proposed Project construction are anticipated to occur over the majority of the Project site, which is about 17 acres; therefore, the Proposed Project would require coverage under the Construction General Permit.

Phase II Small Municipal Separate Storm Sewer System Permit (SWRCB Order 2013-0001-DWQ, as amended)

As part of Phase II, the SWRCB adopted a statewide General Permit for the Discharge of Storm Water from Small MS4s (Water Quality Order No. 2013-0001-DWQ, General Permit No. CAS000004) (Small MS4 Permit) to provide permit coverage for smaller municipalities, including non-traditional small MS4s such as military bases, public campuses, and prison and hospital complexes. The Small MS4 Permit requires development and redevelopment projects to adhere to the Small MS4 Permit and follow published guidance for compliance.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) is a package of three bills (Assembly Bill 1739, Senate Bill 1168, and Senate Bill 1319) that provides local agencies with a framework for managing groundwater basins in a sustainable manner. The SGMA establishes standards for sustainable groundwater management, roles and responsibilities for local agencies that manage groundwater resources, and priorities and timelines to achieve sustainable groundwater management within 20 years of adoption of a Groundwater Sustainability Plan (GSP). Central to the SGMA are the identification of critically over-drafted basins and the prioritization of groundwater basins, establishment of Groundwater Sustainability Agencies (GSAs), and preparation and implementation of GSPs for medium priority, high priority and critically overdrafted basins. GSAs must be formed by June 30, 2017. GSPs must consider all beneficial uses and users of groundwater in the basin, as well as include measurable objectives and interim milestones that ensure basin sustainability. A basin may be managed by a single GSP or multiple coordinated GSPs.

At the state level, DWR has the primary role in the implementation, administration, and oversight of the SGMA, with the SWRCB stepping in should a local agency be found to not be managing groundwater in a sustainable manner. DWR recently approved regulations and guidelines for implementation of the SGMA. Under SGMA, Section 10733.6, a local entity (or entities) can pursue an alternative to a GSP provided that certain sustainability objectives are met. An alternative to a GSP may include “[a]n analysis of basin conditions that demonstrates that the basin has operated within its sustainable yield over a period of at least 10 years” (Section 10733.6(b)(3)). In response to SGMA, Napa County prepared a Basin Analysis Report

for the Napa Valley Subbasin, per the requirements of Water Code Section 10733.6 (b)(3). While the Basin Analysis Report analyzes areas outside the Subbasin to determine how those areas affect recharge and runoff in the Subbasin, the areas outside the Subbasin are not subject to SGMA. The Basin Analysis Report (LSCE 2016c) was submitted to DWR on December 16, 2016 in compliance with SGMA. On November 13, 2019, DWR issued a final determination to not approve the Basin Analysis Report.

Basins in which the submitted alternative was not approved by the DWR must comply with the same planning deadlines applicable to other high- and medium-priority basins under SGMA. GSAs in these basins must submit a GSP by January 31, 2022. Following DWR's decision to not approve the Basin Analysis Report, the Napa County Board of Supervisors acted on December 17, 2019 to become a GSA for the Napa Valley Subbasin and declare their intent to develop a GSP for the Subbasin by January 31, 2022.

Local Regulations

City of St. Helena 1993 General Plan

The City's 1993 General Plan Public Health and Safety Element and Public Facilities Element has the following guiding policies that apply to flood hazards and storm drainage/flooding.

Flood Hazards

Policy 8.6.1: Prohibit the introduction of intensive urban development into designated Flood Hazard Areas.

Policy 8.6.3: Prohibit the construction of structures or flood barriers which would unnaturally divert flood waters or would increase flood hazards in other areas.

Policy 8.6.4: Require a grading permit for any filling, grading, or dredging that may increase potential for flood damage.

Policy 8.6.7: Encourage the use of Flood Hazard Areas within new development areas for open space and recreation uses, including parks and greenbelts.

Policy 8.6.8: Ensure that any new development that is allowed within the floodplain is constructed so that the lowest floor elevation is at least one foot above the l00-year flood level.

Storm Drainage/Flooding

Policy 9.4.1: New development should provide adequate drainage improvements to handle generated storm runoff from the site to the nearest major watershed. The watersheds include York Creek, Sulphur Creek and the Napa River.

Policy 9.4.2: If a City storm drain is available, the developer should participate in the funding to the extent it benefits the development.

Policy 9.4.3: Extension of existing downstream drains which have adequate capacity should be completed at the developer's expense with future reimbursement for oversizing costs at the time of connection by others.

Policy 9.4.4: Grading and earth filling within the designated l00-year floodway should not be permitted except for public streets or bridges.

Policy 9.4.5: Encroachments into the 100-year floodway should not result in any increase in flood levels during the occurrence of the base flood discharge.

Policy 9.4.6: Standards for subdivisions should include the following:

a. All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood.
b. All final subdivision plans will provide the elevation of proposed structure(s) and pads. If the site is filled above the base flood, the final pad elevation shall be certified by a registered civil engineer or surveyor and provided to the floodplain administrator.
c. All subdivision proposals shall be consistent with the need to minimize flood damage.
d. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
e. All subdivisions shall provide adequate drainage to reduce exposure to flood hazards.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The City's 2019 General Plan Public Health and Safety Element and Public Facilities Element has the following guiding policies that apply to flood hazards and storm drainage/flooding.

Flood Hazards/Drainage

Policy PS5.1: Minimize the risk to people, property and the environment caused by flooding hazards. Site new development to minimize potential damage from a 100-year flood.

Continue to require that any new development is constructed FEMA standards. Prohibit the siting of uses within Flood Hazard Areas inconsistent with FEMA standards that could result in health and safety hazards, including those due to the release of chemicals or other substances as a result of inundation or erosion. Ensure that any new flood protection projects comply with federal and State standards.

Policy PS5.6: Coordinate with the Napa County Flood Control and Water Conservation District and other responsible agencies to maintain protocols and funding for the regular inspection and maintenance of flood control facilities in the city, including levees, floodwalls, floodplain terracing, stormwater detention ponds, and pumping facilities.

Policy PF3.1: Ensure that new developments provide adequate drainage improvements and detention to mitigate flooding from increased stormwater runoff attributable to the development.

Policy PF3.C: Consistent with Municipal Code Section 16.32.170, continue to prohibit the creation of new residential lots that will be subject to periodic inundation from floodwaters. New development proposals on existing lots of record must identify flood hazard areas and mitigate all impacts to base flood levels and potential flood damage from grading filling and construction through proper drainage, construction, and location of utilities, in accordance with FEMA requirements.

Policy PF3.E: At the time of development review, require that post-project runoff be limited to pre-project peak flow rates for the five-year and ten-year storms as a condition of approval (See also Climate Change Element, Topic Area 4).

Groundwater

Policy PF1.D: The City of St. Helena should not draw or sell any groundwater beyond that currently allowed until a safe yield of the groundwater system has been identified through a study of the North Main Basin Aquifer by a qualified hydro geologist.

Policy PF1.E: Permit no new development relying on groundwater unless and until it is determined that the incremental production of ground water to support the development will not adversely impact the water production capability of the aquifer supporting the City wells.

Policy PF1.F Track the drilling of new private wells in and around St. Helena and, if so recommended by the qualified hydrologist hired by the City's water system, request that the County impose a moratorium on new well drilling if needed to protect the production capability of the City wells.

St. Helena Municipal Code

The City's Municipal Code, "Public Services," includes Chapter 13.32, which contains the City's Stormwater and Runoff Pollution Control Ordinance. This ordinance empowers the City's Public Works Department to enforce stormwater pollution regulations, including:

- Prohibiting illicit discharges to the stormwater conveyance system;
- Establishing minimum requirements for stormwater management, including source control requirements, to prevent and reduce pollution;
- Establishing requirements for development project site design to reduce stormwater pollution and erosion;
- Establishing requirements for the management of stormwater flows from development projects, both to prevent erosion and to protect and enhance existing water-dependent habitats; and
- Establishing standards for the use of off-site facilities for stormwater management to supplement on-site practices at new development sites.

Title 15, Buildings and Construction, includes Chapter 15.52, Flood Damage Protection. This chapter contains the City's flood damage control provisions. It includes standards for permitting and construction within established flood hazard zones, and gives the City Engineer the authority to administer, implement, and enforce floodplain management regulations through the review and approval of development applications. Chapter 15.52 specifies that all "new construction and substantial improvement of any residential structure shall have the lowest floor, including basement in AE, AH and Al -A30 Zones, elevated to 18 inches above the base flood elevation."

Title 16, "Subdivisions," includes Chapter 16.32, Design Standards and Improvements includes Section 16.32.070, Drainage, which requires stormwater runoff from subdivisions to be collected and conveyed by an approved storm drainage system. The storm drainage system shall be designed by a registered civil engineer for ultimate development of the watershed and shall be capable of collecting and conveying runoff generated by the ten-year flood. The system shall provide for the protection of abutting and off-site properties that may be adversely affected by any increase in runoff attributed to the development; off-site storm drain improvements may be required to satisfy this requirement. In addition, retention ponds, drainage swales and/or check dams may be required to reduce off-site peak storm flow generated by projects to the historic flow.

Title 17, Zoning, includes Section 17.88.030, Subdivisions, which requires that all subdivision proposals and other proposed new developments be reviewed by the City engineer to assure that (1) all such proposals are consistent with the need to minimize flood damage; (2) all public utilities and facilities, such as sewer, gas, electrical and water systems are located, elevated,

and constructed to minimize or eliminate flood damage; and (3) adequate drainage is provided so as to reduce exposure to flood hazards.

Section 17.88.050, FEMA Requirement, which requires that new construction or replacement of existing construction be in conformance with the standards and regulations of the FEMA.

City Stormwater Management Standards

The City has developed stormwater management standards that apply to discretionary and ministerial projects submitting an application for a use permit, building permit, and/or grading permit. The standards include both a construction and post-construction phase review and permitting process implemented by the City's Public Works Department. If a project is subject to construction-phase requirements, the applicant must prepare an Erosion Control Plan for sites of less than 1 acre and a SWPPP for sites of 1 acre or more. The plans must depict BMPs that will be implemented during construction to eliminate or minimize the discharge of pollutants.

The City's Public Works Department conducts site inspections to evaluate the effectiveness of the construction-phase BMPs using the following performance standards:

- No measurable increase of pollution (including but not limited to sediment, concrete and stucco, automotive fluids, hazardous materials, and pathogens) in runoff from the site;
- No slope erosion; and
- Water velocity moving off-site must not be greater than pre-construction levels.

If a project is subject to post-construction requirements, the applicant must submit a Stormwater Control Plan to the Public Works Department. The Stormwater Control Plan must demonstrate compliance with the Bay Area Stormwater Management Agencies Association Post-Construction Manual. This Stormwater Control Plan must illustrate how the project is implementing low-impact development principles and providing for long-term BMP maintenance.

3.9.4 Impacts

Methods of Analysis

Impacts with respect to hydrology and water quality are assessed by comparing conditions expected to occur associated with development of the site relative to the existing environmental setting described above. Post-Proposed-Project hydrology is assessed using the hydrology report prepared for the Proposed Project by the applicant's consultant, included as Appendix H, as well as preliminary Proposed Project plans (e.g., grading plan, erosion control notes, and utility plan) and a review of the Proposed Project's water demand and compliance with the City's water neutrality ordinance (Appendix J, Water Neutral Report). In addition, a well capacity and

sustainability assessment was performed on the agricultural well at the Project site which included a 24-hour well pump test consistent with industry standards. The findings of the well capacity and sustainability assessment were independently reviewed by an independent California Licensed Engineering Geologist, whose peer review was documented in a letter report dated September 9, 2021 (Appendix L). In this case, the only discretionary approvals the Proposed Project applicant is requesting at this time is approval of a Tentative Subdivision Map. Future approvals, including Design Review and a Use Permit required to construct attached multifamily units, would be required prior to any development of the site.

The analysis considers impacts on hydrology, water quality, flooding and groundwater resources in the context of broader issues and concerns affecting the region. The study area for surface water hydrology is the Napa River - Upper St. Helena Reach subwatershed, which is part of the large Napa River watershed, and the study area for groundwater resources is the Napa Valley Groundwater Subbasin. Actions required to implement the City's general plan policies related to hydrology and water quality, as enforced through the Municipal Code and the development approval process, are considered as components of the Proposed Project in the evaluation of impacts.

Thresholds of Significance

Consistent with Appendix G of the California Environmental Quality Act Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - Create of contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    - Impede or redirect flood flows.

- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Threshold Criteria not Applicable to the Proposed Project

Due to the location and characteristics of the Proposed Project, certain elements of the significance criteria above are not applicable and therefore, are not considered potential impacts. These criteria elements are addressed briefly below and are not discussed further in this document.

Alteration of a Stream or River

The Proposed Project would not alter the course of a stream or river because none are encompassed by the Proposed Project boundary. The Proposed Project would not substantially alter the general pattern and/or direction of stormwater runoff because it does not propose substantial modifications to topography (the site is and would remain nearly level), and because runoff would continue to be directed to the north and northeast. Storm runoff from the site would be collected by a series of catch basins in the streets and conveyed to the City's off-site detention basin through underground storm drain lines. Therefore, Impact 3.9-3 (below) addresses the potential for alteration of existing drainage patterns through the increases in the rate or volume of runoff from impervious surfaces, but not through modification of the course of a stream or river. This issue (third significance threshold listed above) is not further addressed.

Tsunami or Seiche

Furthermore, the preconditions necessary for a project to be at risk of hazards due to a tsunami, or seiche require a reasonable distance and elevation relative to a coastline (for sea level rise or seiche) or large body of water (for seiche waves). The Project site is located over 200 feet amsl in elevation and is not next to a large water body subject to seiche. Therefore, there be no impact (or risk) associated with a tsunami or seiche and this issue (fourth significance threshold listed above) is not further addressed.

Impacts and Mitigation Measures

3.9-1: Would the Proposed Project violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality? This impact would be less than significant.

Construction

Development of the Project site would involve up to 16.9 acres of soil disturbance over the course of Proposed Project construction. During this time, the most intensive soil disturbance would occur during site preparation and earthmoving activities associated with grading, installation of underground utilities, foundation and building pad construction, and road and streetscape construction. During this period, soil erosion may result in discharges of sediment-laden stormwater runoff into nearby receiving waters. As discussed in the setting (and shown in Figure 3.9-1), the Project site drains to an existing City-owned detention basin that was constructed as part of the City's Flood Protection Project. Therefore, during construction, the detention basin would be the most immediate storm runoff destination during construction. However, the detention basin has a low-flow outlet, meaning that runoff from the construction site could eventually enter the Napa River.

The primary potential pollutant associated with construction activity is sediment (i.e., high turbidity) generated from site preparation and grading activities. Since the Napa River is listed under CWQ Section 303(d) as impaired for sedimentation/siltation, it has an increased sensitivity to impacts associated with turbid runoff. In addition to sediment, other pollutants associated with construction activity could include heavy metals, oil/grease, fuels, trash and other pollutants from accidental spills or releases of refuse, paints, solvents, sanitary wastes, and concrete curing compounds. Furthermore, as a portion of the site has been historically used as a vineyard and before that an orchard, there is the possibility that soils could contain residual agricultural pesticides or elevated nutrient levels. However, the potential for residual pesticides to remain on-site is low because pesticides are required to demonstrate a lack of persistence in the environment considerably beyond their intended period of use in order to obtain EPA approval. Furthermore, when pesticides are used properly and in accordance with label specifications, potential impacts on the surrounding environment and receiving waters (surface water and groundwater) are minimized. Historically, pesticides degrade with time as repeated rainy seasons flush soils and further dilute residual concentrations. When compared to agricultural land uses, which can include occasional ripping, plowing, and replanting and use of unpaved roads, which continuously leave bare soils exposed to storm runoff, residential land uses have a lower impact with regard to dispersion of fertilizers and/or pesticides into the environment.

Without adequate precautions, construction activities could generate pollutants and/or mobilize sediment such that it contributes to water quality degradation of receiving waters and/or violates Basin Plan objectives. However, compliance with the Construction General Permit and the City's Stormwater and Runoff Pollution Control Ordinance (Chapter 13.32) would require implementation of a SWPPP to address potential construction-related impacts on water quality. The SWPPP must specify the location, type, and maintenance requirements for BMPs necessary to prevent stormwater runoff from carrying construction-related pollutants into the

Napa River and/or the underlying groundwater basin. BMPs must be implemented to address potential release of fuels, oil, and/or lubricants from construction vehicles and equipment (e.g., drip pans, secondary containment, washing stations); release of sediment from material stockpiles and other construction-related excavations (e.g., sediment barriers, soil binders); and other construction-related activities with the potential to adversely affect water quality. The SWPPP must also include a construction site monitoring program that identifies specific requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate (depending on the Risk Level), sampling of the site effluent and receiving waters. The number, type, location, and maintenance requirements of BMPs to be implemented as part of the SWPPP depend on site-specific risk factors such as soil erosivity, construction season/duration, and receiving water sensitivity.

SWPPPs must be developed and implemented by a Construction General Permit Qualified SWPPP Developer (QSD)/Qualified SWPPP Practitioner (QSP). The QSD/QSP is tasked with determining the receiving water risks (including beneficial uses and CWA Section 303d impairments), monitoring site activities that could pose risks to water quality, and developing a comprehensive strategy to control construction-related pollutant loads in site runoff. Based on the Proposed Project characteristics and the setting, the SWPPP would be required to meet risk level II or III requirements as defined in the Construction General Permit. Minimum standard BMPs include erosion and sediment controls; site management/ housekeeping/waste management; management of non-stormwater discharges; run-on and runoff controls; and BMP inspection, maintenance, and repair activities. A rain event action plan must also be prepared by the QSD/QSP to outline the procedures to prepare the construction site for rain events and minimize the potential release of construction-related contaminants. It is at the discretion of the QDS/QSP to use as many BMPs as available which would successfully protect on- and off-site resources from erosion, sedimentation, and pollution.

The following list includes examples of treatment control BMPs commonly employed during construction; although these would vary based on the nature of construction activities, the characteristics of the site, and the existing receiving waters impairments (these features would appear as notes on any final design plans):

- Silt fences installed along limits of work and/or the construction site
- Stockpile containment (e.g., visqueen, fiber rolls, gravel bags)
- Exposed soil stabilization structures (e.g., fiber matrix on slopes and construction access stabilization mechanisms)
- Street sweeping
- Tire washes for equipment

- Runoff control devices (e.g., drainage swales, gravel bag barriers/chevrons, velocity check dams) and slope protection.
- Drainage system inlet protection
- Wind erosion (dust) controls
- Tracking controls
- Prevention of fluid leaks (inspections and drip pans) from vehicles
- Dewatering operations best practices
- Materials pollution management
- Proper waste management
- Regular inspections and maintenance of BMPs

The standard requirements contained in a SWPPP are sufficient to address a project's potential to violate water quality standards or waste discharge requirements. Implementation of SWRCB and San Francisco Bay RWQCB requirements (CWA NPDES Program and Porter–Cologne Water Quality Control Act WDRs) are enforced through the City's Stormwater and Runoff Pollution Control Ordinance (Chapter 13.32). In addition to stormwater runoff, construction activities can generate fugitive dust, which if not properly controlled, can be deposited in nearby waters. Note that this potential impact is addressed in Section 3.3, Air Quality; actions to mitigate adverse effects on air quality would likewise mitigate potential adverse effects on water quality from atmospheric deposition.

The construction-related impact of the Proposed Project on water quality would be **less than significant**, because compliance with existing permitting requirements and conditions of approval are sufficient to avoid water quality degradation, meet water quality standards and Basin Plan objectives, and prevent adverse effects on beneficial uses.

Operation

Implementation of the Proposed Project would include the development of impervious surfaces, including roadways and driveways, and structures (dwellings) which would impede water infiltration and contribute to increased water runoff rates. These increased water runoff rates could gather potential pollutants such as heavy metals, nutrients from lawn fertilization, oil/grease and fuels from areas where vehicles are parked, and other household trash and debris. Stormwater runoff would have the potential to pollute nearby surface waters if storm drain infrastructure and buffers would not be used.

Constituents found in urban runoff vary as a result of differences in rainfall intensity and occurrence, geographic features, the land use of a site, as well as vehicle traffic and percent of impervious surface. In the Napa Valley, there is a natural weather pattern of a long dry period generally from May to October. During this seasonal dry period, pollutants contributed by vehicle exhaust, vehicle and tire wear, crankcase drippings, spills, and atmospheric fallout accumulate on roadways, driveways, and parking lots within the urban watershed. Precipitation during the early portion of the wet season (which typically spans from November to April) washes these pollutants into the stormwater runoff, which can result in elevated pollutant concentrations in the initial wet weather runoff (first flush).

The Proposed Project would be subject to the most recent standards and performance criteria contained in the Small MS4 Permit (described in Section 3.9.3, Regulatory Setting). The City is subject to this permit because it makes discharges to the Napa River from its municipal storm drain system. The Small MS4 Permit requires development and redevelopment projects to adhere to the Small MS4 Permit and follow published guidance for compliance. These include the following:

- Site Design Measures: Site design measures requires early assessment and evaluation of how site conditions, such as soils, vegetation, and flow paths will influence the placement of buildings and paved surfaces. The evaluation is used to meet the goals of capturing and treating runoff and maximizing opportunities to mimic natural hydrology. Options for site design measures include preserving trees, buffering natural water features, and using green roofs or porous pavement.
- Source Control Measures: Source control measures seek to avoid introduction of water quality pollution/degradation altogether. Source control strategies include things like covering refuse/trash areas, properly managing outdoor storage of equipment/materials, minimizing use of pesticides and fertilizers in landscaping, using sumps or special area drains to send non-stormwater discharges to the sewer, ensuring regular grounds maintenance, etc.
- Treatment Control Measures: Treatment control measures retain, treat and/or infiltrate the site runoff produced under normal circumstances, controlling both the quality and quantity of stormwater released to the City's conveyance system or directly to receiving waters. In most situations, this means implementing structural BMPs (e.g., infiltration, bioretention and/or rainfall harvest and re-use) to treat the volume and rate of runoff produced by 85th percentile storm (i.e., design capture volume).
- Operation and Maintenance Requirement: The Small MS4 Permit requires that maintenance agreements stay in place with each property (executed and then recorded with the County Clerk Recorder) to ensure permanent treatment control measures

developed on site are properly maintained and/or repaired in accordance with the stormwater quality control plan.

Overall, the Small MS4 Permit requires new development and redevelopment to adopt a low-impact development strategy, which minimizes hydromodification[6] impacts known to have adverse impacts on receiving waters. The City implements the Small MS4 Permit by requiring developers seeking approval of tentative subdivision maps to comply with MS4 Permit standards and the guidance and criteria in the Bay Area Stormwater Management Agencies Post Construction Manual. Although specific design features have yet to be finalized for the Proposed Project, all of the items above must be included in a Stormwater Control Plan to be submitted to the City as a condition of Proposed Project approval, as described in in the Regulatory Setting section above. The Stormwater Control Plan, to be developed and submitted by the Proposed Project applicant for final Proposed Project approval, must illustrate how the Proposed Project is implementing low-impact development principles and providing for long-term BMP maintenance.

The Proposed Project's grading plan includes all the elements necessary to demonstrate it can successfully comply with MS4 Permit requirements. Based on the findings in Appendix H, the City's detention basin is adequately sized to hold the increase in runoff that would be generated by the Proposed Project (further discussed in Impact 3.9-3). It is expected that the detention basin would be used and/or modified, as necessary, to comply with the water quality design capture volume required under the MS4 Permit, the details of which must be included in the Proposed Project's Stormwater Control Plan. Furthermore, water quality features such as downspouts to landscaped swales; vegetated swales; hydrodynamic oil, water and solid separators; private street sweeping; labeled storm drains ("drains to river") and homeowner educational materials on stormwater pollution prevention are listed on the grading plan as BMPs to be implemented to prevent storm runoff of poor quality from entering the Napa River or seeping into the underlying groundwater table.

Impacts associated with Proposed Project construction and operation on water quality would be **less than significant**, because existing permitting requirements and conditions of approval (i.e., MS4 Permit and the City's Stormwater and Runoff Pollution Control Ordinance) are sufficient to avoid water quality degradation, meet water quality standards and Basin Plan objectives, and prevent adverse effects on beneficial uses.

[6] Hydromodification is a primary contributor to problems related to excessive sediment and altered steam flow dynamics (e.g., flow volumes and velocities), primarily due to impervious surfaces, mass grading, and/or poor road designs (both urban and rural/unpaved).

Mitigation Measures

None required.

3.9-2: Would the Proposed Project decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin? This impact would be less than significant.

As discussed in detail under the environmental setting (Groundwater Resources), the County works with local jurisdictions including the City to sustainably manage the Napa Valley Groundwater Subbasin in compliance with SGMA. In its most recent assessment of conditions, the County, through its technical consultant, has determined that the Subbasin is not exhibiting significant and unreasonable impacts with regard to the applicable sustainability indicators defined by SGMA, including lowering of groundwater levels, depletion of groundwater in storage, degradation of groundwater quality, and depletions of interconnected surface waters (LSCE 2021). In its most recent annual report, the Subbasin was found to continue to exhibit stable groundwater levels, even despite a very dry 2020 water year, as it has historically, and has continued to be operated within the sustainable yield of the Subbasin (of between 17,000 and 20,000 AFY) (LSCE 2021). The long term (1988–2020) annual change in storage for the Subbasin is a decrease of 8,945 AF, following the very dry conditions of 2020, but still within the ranges that are generally experienced over the long term (LSCE 2021). Annual storage changes have commonly fluctuated between positive and negative values dating back to 1988; however, the median change is a positive increase of 1,784 AF, indicating that groundwater demands are not resulting in depletion of the aquifer (LCSE 2021).

Potential Proposed-Project-related impacts on groundwater depends on the component of its total water demand that would come from on-site or off-site groundwater wells. Based on the Proposed Project applicant's Water Neutral Report (Appendix J) the Proposed Project is expected to require 37.04 AFY to supply its total water demand (including both domestic and landscape irrigation, see also Section 3.13, Utilities, Table 3.13-10). Out of this total, it is estimated that up to 17.16 AFY (5,592,210 million gallons) would be supplied by the on-site groundwater well (shown in Figure 3.9-3) to provide for irrigation of all public and private landscaping (including lawns and planter strips between the proposed streets and sidewalks) as well as an existing vineyard in the panhandle portion of the site that is slated to remain. The Proposed Project's landscape irrigation demand was determined by RHA and Spatial Design Group (see Appendix J) using the City's Model Water Efficient Landscape Ordinance. The analysis uses an annual reference evapotranspiration (ETo) of 44.1 inches established for the City. Actual landscape water use associated with the Proposed Project may be lower but cannot exceed this amount under the City's model landscape ordinance. The remainder of the

Proposed Project's water demand (i.e., 19.88 AFY) would be served by the City's municipal/potable water supply.

Therefore, the groundwater demand associated with the Proposed Project would come from a combination of the onsite well (located on Parcel B – see Figure 2-4 in Chapter 2, Project Description) and the City's Stonebridge Complex wells (shown in Figure 3.9-3). As discussed in detail in Section 3.13 (Utilities and Service Systems), the City's municipal water supply system relies on groundwater for, on average, up to 20% of its total supplies (with the remainder coming from a variety of surface water sources). The City relies on its groundwater well to serve as a buffer during drought years, when less surface water is available. It has stated that up to 30% of the City's demand may be served by groundwater, if necessary, in below normal, dry, and critically dry years. Therefore, it is assumed that between 18% and 30% of the Proposed Project's domestic water demand could come from the City's Stonebridge Complex wells. This amounts to 3.98 AFY of Proposed Project demand from the City's groundwater wells during average years, and up to 5.96 AFY during critically dry years.

The distinction between City water and the on-site well water is important, because the Proposed Project would be required to implement the City's water neutrality policy (incorporated by reference in Chapter 13.12 [Water Use Efficiency and New Development] of the City's Municipal Code), in which the Proposed Project must offset the full amount of its City water demand through any combination of on-site water conservation measures, or payment of a fee to be used for implementation of conservation measures for the City's existing housing stock (such as toilet retrofits or other City approved conservation measures). Because the City's municipal connections are served by the same combination of water supply sources, including groundwater, this offset would translate to eliminating the Proposed Project's impact on the City's municipal groundwater wells. Table 3.9-4 shows the Proposed Project's demand for City groundwater. Because there may be a delayed effect due to the timing to complete the Proposed Project's agreed upon offset measures, this impact analysis assumes a (highly unlikely) scenario that the Proposed Project would result in an increase in demand of 3.98 AFY from the City's groundwater well in an average year.

The Stonebridge Complex wells have produced on average about 350 AFY since 2006, ranging from a low of 182 acre-feet in 2012 to a high of 526 acre-feet in 2013 (LSCE 2016, 2020). The wells have a combined capacity of approximately 595 gallons per minute, which is equivalent to 960 AFY assuming constant pumping. The average municipal groundwater demand of the Proposed Project (3.98 AFY) represents just 1.1% of the groundwater typically pumped from the municipal supply wells. In addition, according to the groundwater basin assessment report, groundwater pumping is a relatively small outflow component compared to surface water stormflows and groundwater baseflow discharged to the Napa River (LSCE 2016). Therefore, the basin groundwater budget is dominated much more by precipitation than it is by

groundwater pumping and the proposed groundwater pumping by the project would be expected to have a negligible effect on flows in the Napa River (LSCE 2016).

Table 3.9-4
Project Demand from City Groundwater Wells During Average and Critically Dry Years

Year	Percent City Demand Served by Groundwater	Proposed Project Demand for City Groundwater[1]
Average	18%	3.09 AFY
Critically Dry	30%	5.15 AFY

Source: Appendix J.
Note:
1 Calculated by multiplying the percent (as a fraction) of City groundwater demand per year type by the Proposed Project's total estimated water demand of 19.88 AFY.

Furthermore, the City's average groundwater use represents less than 37% of the wells' combined capacity. Groundwater levels from a dual completion monitoring well located about 600 feet away (SGMA indicator well 222s[/3d]-swgw5, shown in Figure 3.9-3) have been measured on a continuous basis since December 2014. Despite the City's pumping pattern during this time frame (which includes during drought years), along with the agricultural and domestic pumping that occurs in the vicinity, the groundwater level trend in the monitoring well is stable (LCSE 2021). Marked declines of the groundwater table to a level of up to approximately 30 feet bgs are observed in the summer and fall, but the groundwater table returns to its previous level of approximately 22 bgs by early spring (LSCE 2021).

As discussed in detail in the environmental setting (Groundwater Resources), the dual completion monitoring well is one of the Subbasin's representative monitoring sites established for measuring whether sustainability goals are being met. The minimum threshold that would indicate a significant and unreasonable lowering of groundwater levels, reduction in groundwater storage, and/or streamflow depletion for the indicator well is 32 feet bgs (equates to 185 feet above mean sea level (amsl)) for the shallow screened well and 53 bgs (164 feet amsl) for the deeper screened well (LSCE 2016). In fall 2019 (when groundwater levels are typically at their lowest), the measured groundwater levels at the indicator well were 29 feet bgs (188 feet amsl) and 46 bgs (171 feet amsl) for the shallow screen and deep screen, respectively (DWR 2020). By Spring 2020, the shallow well had risen to 20.4 feet bgs or 196.6 amsl and the deeper well to approximately 36 feet bgs or 181 amsl (LSCE 2021). Despite heavy pumping to sustain the area's municipal and agricultural water demands, these levels remain above minimum thresholds set to indicate significant and unreasonable impacts with regard to groundwater sustainability under SGMA. Given the aforementioned factors, a 0.9% increase in the City's groundwater demand associated with the Proposed Project would not have a measurable impact on the groundwater levels in the vicinity of the Stonebridge Complex wells.

This would likewise be the case for the Proposed Project's demand of 17.16 AFY from the on-site well. This water demand comes out to an average pumping rate of 10.6 gpm compared to the well yields of vicinity wells that range from 39 to 147 gpm. The on-site well, proposed to be located on Parcel B of the proposed subdivision, would easily be capable of supplying this amount based on the well's yield (as reported by the Project applicant) of 350 gpm. Although the well is currently inoperable and would need to be repaired so it is operational, this is also consistent with regional well yields. The recent well capacity and sustainability assessment performed on the agricultural well on the Project site confirmed an ability of the existing well to meet the proposed average pumping rate of 10.6 gpm (Appendix L). In the 24-hour pump test, a pumping rate of 40 gpm was employed and only one foot of drawdown was measured in the well which stayed consistent throughout the pumping period (Appendix L). The immediate recovery of this relatively small drawdown upon cessation of pumping was further evidence of high aquifer transmissivity (i.e., an ability of a water bearing unit to transmit water flow) and relatively abundant groundwater.

As shown in Table 3.9-2, there are a number of municipal and irrigation wells in the vicinity of the Project site, and average well yields far exceed the anticipated demand for the Proposed Project (note minimum well yields listed are for domestic wells constructed for low yield). The aquifer in general is known to be a productive alluvial aquifer, and therefore, there would be sufficient yield available to supply the Project's well water landscape irrigation demand as also demonstrated by the findings of the site specific well pump test conducted on the existing agricultural well on the Project site. The proposed rate of pumping is relatively low and the resulting radius of influence would be highly localized, and greatly overshadowed by the radius of influence associated with the much higher producing agricultural and municipal supply wells in the surrounding vicinity. The existing surrounding levels of groundwater pumping has not produced undesirable results under SGMA (LSCE 2021) and both regional and local groundwater levels have remained stable; therefore, the potential impact of using the on-site well as proposed would be less than significant.

A review of the existing well indicates that the well is screened from 80 feet bgs to a total depth of 410 feet bgs with a 20-foot seal at the surface. Therefore, the well would draw from the deeper volcanic aquifer, below the Napa Valley alluvium which is considered hydraulicly connected to the Napa River (Appendix L). Therefore, the proposed pumping from this well is not likely to have any direct effect on surface flow in the Napa River. In addition, as stated above, the Subbasin as a whole is being managed sustainably, with a long-term median increase in groundwater storage of 1,784 AFY, therefore the localized impacts on groundwater levels and effects on flows in the Napa River would be minimal, thus the Proposed Project's overall impacts on groundwater resources would be **less than significant**.

Mitigation Measures

None required.

3.9-3: Would the Proposed Project substantially alter the existing drainage pattern of the site or area through the addition of impervious surfaces resulting in erosion or siltation on- or off-site; increasing the rate or amount of surface runoff resulting in flooding on- or off-site; contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide polluted runoff; or impede or redirect flood flows? This impact would be less than significant.

Alterations to drainage patterns would be limited to increases in the rate and volume of storm water runoff associated with impervious surfaces. According to Appendix H, the Proposed Project would result in the addition of 10.91 acres of impervious surface, which is equivalent to an impervious surface coverage of 58%. Increases in the rate and volume of storm water runoff can be associated with exceedance of local storm drain capacity, increases in on- or off-site flooding, and/or hydromodification impacts to receiving waters, which include increase bank erosion or contribution of site-related pollutants. Because the Proposed Project would not alter the course of a stream or river and is not located within the SFHA of the Napa River, it would not impede or redirect flood flows.

In addition, the Project site would be subject to flooding only in a highly unlikely, catastrophic scenario. Because the Proposed Project consists of residences (as opposed to industry or businesses that store appreciable quantities of hazardous materials and/or wastes), the risk of releasing pollutants during such flooding would be low. The residences could have small quantities of household hazardous wastes, and such wastes could be released in a catastrophic flood scenario. However, in the context of such flooding, the release of such waste would not result in measurable increases in pollutant loads carried by the river during such a flood event, and would be dwarfed by the effects caused within the entire watershed.

Potential impacts associated with increases in the rate and/or volume of runoff produced by the Proposed Project are addressed below.

Substantial Erosion or Siltation On- or Off-Site

The off-site City detention basin has been designed with adequate capacity to capture and treat increases in the rate and volume of stormwater runoff associated with development in this area of the City, including development of the Project site with impervious surfaces. Per an agreement with the City and the Comprehensive Flood Protection Project's Interior Drainage Analysis Final Report for the Miller Property/Hunter Property/Hunt Avenue, it was determined that development of the Flood Protection Project's detention basin would account for future

development of the Hunter property (Project site) up to 70% impervious surface area (Appendix H). The Proposed Project is estimated to be developed at approximately 58% impervious surface; therefore, allowing the Project site's increased runoff to be contained within the City's detention basin without the need to expand the basin or further development of facilities.

As discussed under Impact 3.9-1, the Proposed Project would be subject to the most recent standards and performance criteria contained in the Small MS4 Permit because it would be required to prepare and submit for City approval a Stormwater Control Plan that complies with the Bay Area Stormwater Management Agencies Post Construction Manual. It is expected that the City's detention basin would be used and/or modified as necessary to comply with the water quality design capture volume required under the MS4 Permit, the details of which must be included in the Proposed Project's Stormwater Control Plan. Furthermore, water quality features such as downspouts to landscaped swales; vegetated swales; hydrodynamic oil, water and solid separators; private street sweeping; labeled storm drains ("drains to river") and homeowner educational materials on stormwater pollution prevention are listed on the grading plan as BMPs to be implemented to prevent storm runoff of poor quality from entering the Napa River or seeping into the underlying groundwater table.

The operation-related impact of the Proposed Project on water quality would be **less than significant**, because compliance with existing permitting requirements and conditions of approval (i.e., MS4 Permit and the City's Stormwater and Runoff Pollution Control Ordinance) are sufficient to avoid water quality degradation (including erosion and siltation).

Increases in On- or Off-Site Flooding

As previously discussed, the City-owned off-site detention basin has been designed to store the increase in storm water runoff generated from the Project site during a 100-year storm event. During major flood events, the levee culvert gate is closed, routing stormwater into the detention basin. This avoids contributing to flows within the Napa River. As water fills the basin, the pump station is activated and water is pumped from the basin into the Napa River. However, by the time that occurs, the detention basin would have already captured the increase in flows associated with impervious surfaces on the Project site. For this reason, the impact of the Proposed Project to both on- or off-site flooding would be **less than significant.**

Stormwater Drainage System Capacity

The Proposed Project would construct storm drains or as required, improve existing storm drains to ensure adequate capacity is available to carry runoff produced by a 10-year storm event. Based on the Proposed Project's utility plan, on-site storm flows from single-family residences would be conveyed to the off-site detention basin via underground storm drain lines varying in diameter from 15 to 30 inches. Storm runoff from the Project site east of the proposed

Starr Avenue extension (multifamily housing) would be collected by 15-inch storm drains and connected to the City's existing 36-inch storm drain and would drain into the adjacent detention basin. Title 16 of the City's Municipal Code requires a new stormwater drainage system be designed by a registered civil engineer for ultimate development of the watershed, and to convey runoff generated by the 10-year flood. Per Title 16, the stormwater drainage system must also be designed to provide for the protection of abutting and off-site properties, and off-site storm drain improvements may be required to satisfy this requirement. Street curbs would be designed to adequately collect and convey the runoff produced by a 100-year storm. As indicated above, the existing off-site detention basin was designed to accommodate runoff from the Project site of up to 70% impervious surface area.

Because compliance with the City's Municipal Code and improvement standards associated with approval of tentative subdivision maps, and because the off-site detention basin was designed with adequate capacity, the Proposed Project would have a **less-than-significant impact** related to exceedance of stormwater system capacity.

Mitigation Measures

None required.

3.9-4: Would the Proposed Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? This impact would be less than significant.

As discussed under Impact 3.9-1, the Proposed Project would comply with applicable regulations and permits designed to comply with the Water Quality Control Plan for the San Francisco Bay Region. The SWPPP and Stormwater Control Plan to be developed and implemented in compliance with the City's Municipal Code would be effective at meeting water quality objectives of the Basin Plan. As discussed under Impact 3.8-2, the County is currently achieving sustainable groundwater management under an alternative GSP submittal (Basin Analysis Report). For the reasons discussed therein, the groundwater demand of the Proposed Project would not have an appreciable impact on meeting minimum thresholds established for the Napa Valley Subbasin under SGMA. Therefore, the impact of the Proposed Project on water quality and groundwater management plans would be **less than significant**.

Mitigation Measures

None required.

3.9.5 Cumulative Impacts

The cumulative context for the analysis of potential water quality impacts related to surface water is the Upper St. Helena Reach subwatershed (shown in Figure 3.9-1). This is because stormwater discharges originating from this area could combine with those of the Proposed Project to result in an increase in non-point source pollution discharging into the Napa River upstream of Sulphur Creek. Such increases could result from a combination of construction activities, greater use intensity, increased coverage of impervious surfaces and/or increased use of routine household cleaners and landscape chemicals. New development and/or redevelopment projects in these locations have the potential to generate impacts related to the violation of water quality standards, Basin Plan water quality objectives, and/or TMDLs established for the Napa River.

For groundwater resources, the cumulative context is the Napa Valley Groundwater Subbasin (Subbasin) (shown in Figure 3.9-3). Development of past, present and reasonably foreseeable projects within this area that results in an increase in groundwater demand could result in impacts related to depletion of the underlying aquifer, regional lowering of the groundwater table level, or depletions of interconnected surface waters.

As the Proposed Project does not have impacts with regard to flooding (since the potential impact is eliminated through use of the off-site detention basin), it would not contribute to any cumulative flooding impacts in the subwatershed.

3.9.5: Would the Proposed Project cumulatively degrade surface or groundwater quality? The Project's contribution would not be considerable.

State and regional regulations described in Section 3.9.3 (Regulatory Setting) would reduce the rate of runoff and filter out pollutants in the same or similar manner as described in Impact 3.9-1. Construction activities are required to comply with the SWRCB statewide NPDES stormwater permit program, the Porter-Cologne Act's requirements for site-specific waste discharge, as well as local agency public works construction standards. In addition, the City's 1993 General Plan policies, 2019 General Plan policies, and existing City regulations would ensure protection of water quality, improve stormwater management, and reduce stormwater pollution. Increased impervious surface area as a result of the Proposed Project and other development projects in the watershed would be mitigated through application of the Small MS4 Permit, which requires the capture and treatment of stormwater runoff for the 85th percentile storm event. Areas within the cumulative context that are outside the jurisdictional boundary of the City would implement similar measures because Napa County requires development and redevelopment projects to implement the same standards discussed under Impact 3.9-1 (i.e., SWPPP and MS4 Permit standards).

Based on development of past, present and reasonably foreseeable projects in the Upper St. Helena Reach subwatershed this is an existing potentially significant cumulative impact.

Due to the residential nature of the Proposed Project and compliance with mandatory existing state and local requirements to ensure protection of water quality in the subwatershed the Proposed Project's contribution to this potentially significant cumulative impact is less than considerable resulting in a **less-than-significant cumulative impact**.

Mitigation Measures

None required.

3.9-6: Would the Proposed Project cumulatively decrease groundwater supplies or interfere substantially with groundwater recharge such that sustainable groundwater management of the basin would be impeded? The Project's contribution would not be considerable.

As discussed under Impact 3.9-2, Napa County monitors the groundwater basin and has established minimum thresholds and measurable objectives for the Subbasin, which includes a representative monitoring site near the Pope Street Bridge crossing of the Napa River. The Basin Analysis Report prepared for the Subbasin, indicates that groundwater conditions in the Subbasin are currently meeting sustainability goals established per SGMA and the Subbasin has operated within its sustainable yield over a period of more than 20 years. The Report includes projects and management actions to ensure sustainability targets are met through the planning and implementation horizon of the City's 2019 General Plan (2040 and beyond) (LSCE 2016). The City's 2019 General Plan EIR notes that from 2011 through 2015, groundwater drawn from the Subbasin accounted for about 18% of the City's total water supply (City of St. Helena 2018). In addition, due to stable groundwater levels observed during recent drought conditions (from 2012 through 2015) it indicates recent rates of groundwater pumping have not exceeded the sustainable yield of the subbasin (City of St. Helena 2018). As noted above under Impact 3.9-2, the Proposed Project's increase in water demand that would be supplied by groundwater wells would amount to a 0.9% increase which would not have a measurable impact on the groundwater levels in the vicinity of the Stonebridge Complex wells.

Future development in the City is required to comply with existing regulations that would ensure overall infiltration into the aquifer would remain robust, including requiring low-impact development projects be included to capture and infiltrate stormwater runoff, consistent with Bay Area Stormwater Management Agencies Association Manual, City Municipal Code, and required compliance with the NPDES permit, MS4 requirements, and/or General Waste Discharge Requirements. The 2019 General Plan includes policies PF1.E and PF1.F that require tracking new private wells to protect groundwater production. The 2019 General Plan

does not identify a significant cumulative groundwater impact. However, the Napa County General Plan Update EIR (SCH #2005102088), notes increased demand on groundwater supplies associated with increased development in the County (including cities) could lead to groundwater decline and overdraft contributing to a significant cumulative impact on groundwater resources (Napa County 2007).

The City has implemented actions to ensure the groundwater Subbasin continues to operate within its sustainable yield. The City's 2011 Water Neutral Policy for Development requires all new development to be water-neutral, through a combination of on-site water conservation measures, off-site retrofitting and use of well water, as allowed. Future development in the City is not expected to result in an increase in total water demand because new development is required to offset new demand with water conservation retrofits of existing facilities, or in-lieu payments to the City to carry out any retrofit projects. In addition, as addressed under Impact 3.9-2, the on-site agricultural well is expected to yield 350 gpm (as reported by the Project applicant) and demonstrated an ability to pump at a rate of 40 gpm over a 24-hour period with negligible drawdown, which is far more capacity than the 10.6 gpm the Proposed Project would require for on-site irrigation. Based on the findings of the well capacity and sustainability test, this rate of pumping would have a highly localized radius of influence, if any, , and would be greatly overshadowed by the radius of influence associated with the agricultural and municipal supply wells in the surrounding vicinity. Therefore, given Napa County's active management of the Subbasin under SGMA, available information, and the City's implementation of a water neutral development policy, the Proposed Project's contribution to a cumulative impact with regard to groundwater is not considerable resulting in a **less-than-significant contribution.**

Mitigation Measures

None required.

3.9.6 References

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3.10 LAND USE

3.10.1 Introduction

This section describes existing and planned land uses within and adjacent to the proposed Hunter Subdivision Project (Proposed Project) site within the City of St. Helena (City), identifies land use designations, and zoning, and analyzes consistency of the Proposed Project with the City's 1993 General Plan goals and policies and the City's Municipal Code, Title 17 Zoning.

The City has since adopted an update to the 1993 General Plan; the 2019 General Plan (known as the "General Plan Update 2040," a General Plan with a planning horizon of 2040) was adopted in May 2019. However, since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this Environmental Impact Report (EIR) uses the 1993 General Plan as the applicable general plan for the purposes of evaluating consistency of the Proposed Project with the City's General Plan policies in effect when the application was deemed complete by the City. Nonetheless, this EIR also evaluates consistency with the City's adopted 2019 General Plan for informational and consistency purposes.

California Environmental Quality Act (CEQA) Guidelines Section 15125(d) provides that the environmental setting of an EIR must discuss "any inconsistencies between the proposed project and applicable general plans and regional plans." Potential inconsistencies between the Proposed Project and the City's 1993 General Plan, and the Zoning Ordinance are discussed in this section in addition to a review of the City's 2019 General Plan. Technical sections included in this Draft EIR also evaluate and analyze any potential physical/environmental effects and potential incompatibilities with the 1993 General Plan that may be considered in the determination of physical environmental impacts.

Comments received in response to the Notice of Preparation related to land use included concerns about consistency with the underlying land use designation and zoning, and potential conflicts with the City's 1993 General Plan. All of these issues are addressed in this section. A copy of the Notice of Preparation and comments received is included in Appendix A.

Information for this section was primarily obtained from the City of St. Helena 1993 General Plan (City of St. Helena 1993), City of St. Helena 2019 General Plan (City of St. Helena 2019), City of St. Helena Municipal Code, and other miscellaneous Proposed Project information.

3.10.2 Environmental Setting

The following provides an overview of the existing land use designation, zoning and land uses on the Project site as well as the surrounding land use designations and zoning.

Existing Site

The Project site (Assessor's Parcel Number is 009-030-057) is located in the northeast portion of the City, at the eastern terminus of Adams Street and the west/north[1] terminus of Starr Avenue, three blocks east of downtown and State Route 29, and generally south/west of the Napa River. The Project site has historically been used for agriculture and contained an orchard that was removed in the 1960s. In the early 1970s a small vineyard was planted on approximately 7-acres of the Project site. In the mid-2000s the site was altered by the addition of fill material primarily associated with the construction of the St. Helena Comprehensive Flood Protection Project (Flood Protection Project) along the Napa River, located to the north and northeast of the Project site.

The Project site is presently undeveloped with the exception of a small vineyard under active cultivation located in the southwestern portion of the site, near the terminus of both Adams Street and Starr Avenue. The site is generally level and does not contain any streams or waterways. Trees are located along the edge of the southern/southeastern boundary of the site, including parallel to the Vineyard Valley Mobile Home Park. Based on the Proposed Project's grading plan, the elevation across the Proposed Project's development footprint ranges from approximately 230 feet above mean sea level on its southern edge to approximately 212 feet above mean sea level on its northern edge. The portion of the site planned for the extension of Adams Street ranges from 243 feet to 230 feet above mean sea level. An existing well is located near the southeastern edge of the Project site.

Surrounding Land Uses

Adjacent land uses include single-family and multi-family residential development to the south and southeast, including the Vineyard Valley Mobile Home Park, Hunt's Grove Apartments, and single-family residences along Starr Avenue (see Figure 2-3 in Chapter 2, Project Description). Office uses are located immediately adjacent to the site's westernmost edge at the terminus of Adams Street. Single-family residences along Monte Vista Avenue and Hunt Avenue back up to the site. Undeveloped land currently under cultivation or fallow is located to the north and northwest. A single-family residence along with an accessory dwelling unit and barn is currently under construction just north/west of the site. A gravel maintenance road/public trail borders the site along the north/northwest and a city storm water detention basin borders the site to the south/southeast. A drainage ditch is located along the southwestern edge of the property. Starr Avenue and Adams Street essentially stub into the Project site.

[1] The site is oriented on an axis that runs generally on a diagonal from southwest to northeast. Directions in relation to the site are therefore in many cases not directly "north" or "'west" are shown as a combination of directions.

The open space areas located north and east of the site are part of the City's Flood Protection Project. The Napa River is located approximately 540 feet north and northeast of the Project site.

Land uses surrounding the Project site are currently designated High Density Residential (HDR) and Medium Density Residential (MDR) adjacent to the south and southeast; Open Space to the north and along the western Proposed Project boundary, and Agriculture farther west in the City's 2019 General Plan. In the 1993 General Plan, the Open Space parcel to the north and west of the Project site was designated as MDR rather than Open Space.

City of St. Helena 1975 General Plan Land Use Designation

The project site was designated for high density residential development in the 1975 St. Helena General Plan. Densities envisioned in the 1975 General Plan were 4-6 units per acre for single family homes and up to 16 units per acre for multi-family dwellings.

That land use policy was revised with the adoption of the updated 1993 General Plan (discussed below).

City of St. Helena 1993 General Plan Land Use Designations

The Project site is designated as MDR in the City's 1993 General Plan. According to the 1993 General Plan, "[t]he MDR designation provides for single-family detached and attached homes, secondary residential units, public and semi-public uses, and similar and compatible uses. Residential densities shall be in the range of 5.1 to 12.0 dwelling units per gross acre (du/acre). The MDR designation is the predominant residential designation, occurring throughout large areas of the City. The wide distribution of this designation is intended to maintain a development pattern in newly developing areas that is consistent with historic development patterns" (City of St. Helena 1993).

City of St. Helena 2019 General Plan ("General Plan Update 2040")

As previously mentioned, the City adopted the 2019 General Plan, known as the "General Plan Update 2040," in May 2019. However, since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project. For informational purposes, the City's 2019 General Plan designates the Project site for MDR, the same as the 1993 General Plan (City of St. Helena 2019, Figure 2.1). However, the allowable density is up to 16.0 dwelling units per acre.

Existing Zoning

The City of St. Helena's Zoning Code (Title 17) specifies building setback, building height, building density, and site coverage to ensure that the public's health, welfare, and safety would be protected and that development occurs in a planned, logical fashion. The Project site is currently zoned Medium Density Residential (MR), which allows a residential density of between 5.1 to 16.0 dwelling units per acre. The MR district is consistent with the MDR General Plan designation. The MR district provides for single-family detached homes, accessory dwelling units, limited agricultural uses and compatible uses, as well as attached duplex and triplex units, condominiums, and townhouses, and similar uses with a use permit.

The City's General Plan Housing Element Update 2015–2023 was revised and last updated in May 2015. The City's 2015-2023 Housing Element identifies the site as vacant and underutilized (City of St. Helena 2015b, p.133, Table 43).

3.10.3 Regulatory Setting

There are no federal or state land use requirements applicable to the Proposed Project.

Regional Regulations

Plan Bay Area 2040

Plan Bay Area 2040 (Plan), adopted in 2017, is a state-mandated, integrated long-range transportation and land use plan. The region adopted its previous plan — Plan Bay Area — in July 2013. As the Bay Area's first regional transportation plan to include a Sustainable Communities Strategy (SCS) as required by Senate Bill (SB) 375, the original Plan Bay Area (2013) charted a course for reducing per-capita greenhouse gas emissions through the promotion of more compact, mixed-use residential and commercial neighborhoods near transit. In the Bay Area, the Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG) are jointly responsible for developing and adopting a SCS that integrates transportation, land use and housing to meet greenhouse gas reduction targets set by the California Air Resources Board. Plan Bay Area 2040 projects household and employment growth in the Bay Area over the next 24 years, provides a roadmap for accommodating expected growth, and connects it all to a transportation investment strategy that strives to move the Bay Area toward key regional goals for the environment, economy and social equity.

SB 375 was adopted with the goal of reducing greenhouse gas emissions from cars and light trucks. SB 375 will make it easier for communities to build housing and provide transportation choices. The SCS is a plan to meet the region's greenhouse gas emissions reduction target, while taking into account regional housing needs, transportation demands, and protection of

resource and farm lands based on the best forecast of likely land use patterns provided in coordination with ABAG's partner agencies.

Local Regulations

City of St. Helena 1993 General Plan

As noted in the General Plan, "growth continues to be one of, if not the primary issue facing St. Helena according to input from the community. Since the early 1970s when the City experienced a dramatic increase in growth pressures, the community has strongly supported a policy of deliberate slow growth in order to protect the fragile charm and beauty of the City, to ensure that natural resources such as water supply and prime agricultural land are not lost or overused, and to ensure that adequate public services such as schools and sewers can be provided. In addition to regulating the rate of growth, the City will also control where growth can occur by establishing an Urban Service Area." To address the desire to manage growth the City developed an Urban Service Area, which discourages urban sprawl by containing urban development within the designated Urban Service Area. The Urban Service Area is surrounded by agriculturally designated land and includes 663 acres designated for residential uses to accommodate projected growth, while maintaining a rational and compact development pattern at buildout (City of St. Helena 1993). The Project site is within the Urban Limit Line, which runs along the westerly edge of the Project site, separating it from the agricultural lands to the west and north.

The following goals and policies from the 1993 General Plan applicable to the Proposed Project are listed below. A consistency analysis for all the policies listed below is included in the impact section.

> Growth Management
>
> **Policy 2.6.1:** New development should be required to occur in a logical and orderly manner within well-defined boundaries, and be consistent with the ability to provide urban services.
>
> **Policy 2.6.2:** Urban development shall be allowed to occur only within the Urban Service Area during the time frame of the General Plan.
>
> **Policy 2.6.3:** Urban services such as sewer, water, and storm drainage will only be extended to development within the Urban Service Area. Exceptions will be permitted when undue hardship can be demonstrated, and proposed improvements are not found to be growth inducing.

Policy 2.6.4: Permit infill development and higher densities within currently developed areas wherever possible to minimize and postpone the need for expansion of the Urban Service Area.

Implementing Policy 2.6.6: Limit the amount of land designated for urban uses to those areas that can reasonably be predicted to be developed over the life of the plan. Areas not projected for urban development within the life of the plan shall be designated for agricultural or other non-urban uses.

Residential Growth Management

Policy 2.6.9: Limit the approval of new residential development to a maximum rate of 17 dwelling units per year.

Policy 2.6.10: Maintain a cap on residential development of 2,850 total dwelling units citywide by the year 2010. The total number of dwelling units shall not be construed as a goal, but shall be an absolute maximum allowable number.

Residential

Policy 2.6.14: Encourage a mix of housing types and price ranges to allow choice for current and future generations of St. Helenans.

Policy 2.6.15: Encourage new residential development in all density ranges that is consistent with scale and character' of the older residential districts of the City, particularly the neighborhoods west of Main Street

Policy 2.6.16: Encourage the development of higher density housing in areas near the center of town and close to recreation and services.

Policy 2.6.17: Minimize situations where new residential development will block public view of surrounding vineyards

Policy 2.6.18: Minimize large lot development (one dwelling unit per acre or less), except where this scale of development would not threaten retention of vineyards, inefficiently utilize land, or physically separate the community from the surrounding vineyards

Policy 2.6.19: Permit higher density housing in single family neighborhoods as long as the development character of the single family area is maintained (i.e., lot widths, orientation to street, building heights, etc.).

Policy 2.6.20: Encourage the subdivision and development of larger parcels (3 acres or more) as "planned unit developments" to ensure a more comprehensive and creative approach to planning the development as a single unit.

The “planned unit development” approach provides developers with greater design flexibility while ensuring the City adequate design review. The intent is to create developments that complement existing community character. The City will favor planned unit developments that provide generous amounts of open space, covered parking, the separation of pedestrian and vehicle traffic, and on larger tracts, a variety of housing types: single-family detached, duplex, and multi-family dwellings, in one and two-story structures.

Policy 2.6.21: Require new residential projects to be designed to facilitate non automobile modes of travel (i.e., walking, biking, transit, etc.).

St. Helena 2019 General Plan (“General Plan Update 2040”)

The City recently adopted an update to its 1993 General Plan in May 2019. Although the updated general plan policies will not be considered for this Proposed Project as discussed previously, the relevant policies are provided solely for information given the City has an updated general plan and are not evaluated for consistency with the Proposed Project. The Appellate Court has ruled in *Chaparral Greens v. City of Chula Vista* that “applicable” plan within the meaning of CEQA Guidelines, Section 15125(d) is a plan that has already been adopted and thus legally applies to the project; draft plans need not be evaluated.

In the 2019 General Plan one of the primary goals of the City is to contain development and preserve agricultural lands in and adjacent to the City, similar to the goal of the 1993 General Plan. In lieu of defining an Urban Services Area, the 2019 General Plan updates the City’s Urban Limit Line and designates Urban Reserve Areas. The Urban Limit Line denotes the limit of where urban development is permitted within the incorporated area of the City. The intent is to discourage urban sprawl by containing urban development within designated areas. There are a handful of areas designated Urban Reserve Areas, which can be considered for development after land within the Urban Limit Line are developed and if additional land is needed. Notably, the 2019 General Plan retains the medium density residential designation for the site and does not change the Urban Limit Line relative to the Project site.

The relevant goals and policies of the 2019 General Plan Land Use and Growth Management Element are listed below. As can be seen below, many policies are similar to or the same as the policies contained in the 1993 General Plan.

Manage Growth and Maintain Community Character.

St. Helena is committed to preserving its existing community character, maintaining agricultural lands, managing growth and the impacts of tourism, and ensuring that adequate infrastructure and facilities are provided.

Promote High-Quality and Sustainable Development.

St. Helena is dedicated to a high standard of quality, economic viability and ecological sustainability with respect to the design, planning, and construction of new and renovated public and private facilities.

Growth Management

Policy LU1.1: Require new development to occur within well-defined boundaries and be consistent with the ability to provide urban services. New development should mitigate infrastructure impacts by using sustainable, best management practices in green building and stormwater management and paying its share of development impact fees, while minimizing impacts on sewer, water, energy, and natural resources.

Policy LU1.2: Allow urban development to occur only within the Urban Limit Line. Consider an exception for on-site employee housing on Agricultural lands. Urban services, such as sewer, water, and storm drainage, will only be extended to development within the Urban Limit Line.

Policy LU1.3: Support agricultural and low-intensity uses beyond the Urban Limit Line.

Policy LU1.4: In order to minimize and postpone the need for expansion of the Urban Limit Line, encourage infill development within currently developed areas.

Policy LU1.5: Require new development to provide adequate infrastructure and urban services, including compliance with the policies and implementing actions affecting new development as set forth in the Public Facilities and Services Element.

Policy LU1.7: Continue to limit the approval of market rate residential development to the maximum allowed under the Growth Management System. Regulated affordable units and second units are exempt from this limitation.

Implementing Action LU1.A: Continue to allow the construction of second units – also known as accessory dwelling units – and consider allowing the division of single-family homes into two or more units under appropriate circumstances, in order to increase

residential density and housing availability without requiring an extension of the Urban Limit Line.

Residential Neighborhoods

Policy LU2.1: Promote a mix of housing types and price ranges that are consistent with the Housing Element RHNA categories of housing affordability.

Policy LU2.2: Encourage new residential development that is consistent in design, size, color, and floor area ratio (FAR) with the older residences in the neighborhood.

Policy LU2.3: Protect residential neighborhood views of surrounding vineyards and mountains.

Policy LU2.4: Encourage the subdivision and/or development of larger parcels as Planned Unit Developments to ensure a more comprehensive and creative approach to planning the development as a single unit. This does not prohibit use of Planned Unit Developments on parcels less than three acres.

Policy LU2.5: Encourage the development of higher density housing in areas near the center of the city and close to recreation and services, such as transit, retail, and public facilities.

Policy LU2.6: Allow residential density at the higher end of the permitted range for single family development within Medium and High Density Residential Land Use designations as long as the development character of the single family area is maintained, including lot widths, orientation to street, building heights, onsite parking, traffic, and noise, among other considerations.

Policy LU2.7: Ensure safe, walkable, and bikeable residential neighborhoods and vibrant, livable streets.

City of St. Helena Housing Element Update 2015–2023 Goals, Policies, and 8-Year Action Plan

The purpose of the Housing Element is to establish a comprehensive plan to address housing needs in the City over the eight-year planning period between January 31, 2015 and January 31, 2023. Every jurisdiction in the state is required to submit a Housing Element to ensure the housing needs of all residents are being met. The Housing Element establishes the community goals, and policies surrounding the development, rehabilitation, and preservation of housing units to meet the needs of City residents (present and future). The City's Housing Element was adopted in May 2015.

Applicable goals and supporting policies from the Housing Element are as follows:

- **Goal 1 - A Diversity of Housing to Meet Local Needs:** Facilitate development of a variety of housing types to meet the full range of housing needs in our community, with particular emphasis on housing for our local workforce, people with special housing needs, and people with extremely low, very low, low and moderate incomes.
- **Policy HE1.3:** Encourage the development of affordable housing and remove development constraints as feasible.
- **Goal 2 - Efficient Land Use and High Quality Neighborhoods**: Make efficient use of land within the Urban Limit Line to protect agricultural lands, promoting compact, well-designed developments that 'fit in' with existing neighborhoods and contribute to the overall livability of our community. Encourage a balance of housing types throughout the entire community.
- **Policy HE2.1:** Encourage higher density development where appropriate.
- **Policy HE2.2:** Ensure that higher density housing opportunity sites are not lost to lower density uses.
- **Policy HE2.4:** Promote second unit production.
- **Policy HE2.6:** Promote a balance of types of housing throughout the whole community.

St. Helena Municipal Code –Title 17 Zoning

The City of St. Helena Municipal Code, Title 17 Zoning is designed to protect and promote the public health, safety, and general welfare of the citizens of St. Helena and provides the purpose, permitted and conditional uses, and any special district provisions for the City's various zoning districts.

Excerpts from applicable sections from the Title 17 of the City's Municipal Code are included below.

Chapter 17.40 Medium Density Residential District

Section 17.40.010 Purpose

The MR district is established for consistency with the medium density residential general plan designation. The district provides for single-family detached homes, accessory dwelling units, limited agricultural uses and compatible uses. Residential densities shall not be less than 5.1 dwelling units per acre nor more than 16 dwelling units per acre (Ord. 07-5 § 2 (part): Ord. 05-4 § 1 (part): prior code § 27.50).

Section 17.40.030 Conditional Uses

The following uses require approval of a use permit as regulated by Chapter 17.168:

A. New construction of one single-family dwelling on parcels where the minimum density is two units or greater, pursuant to Section 17.40.060;

B. New attached duplex or triplex units or conversion of an existing single-family dwelling to duplex or triplex, compatible with the design and architecture of the neighborhood and consistent with the density and floor area ratio of the district;

Chapter 17.116 Accessory Building, Structures, Dwelling and Uses

Section 17.116.030 Accessory Dwelling Units

The purpose of this section is to allow and regulate accessory dwelling units (ADUs) and junior accessory dwelling units (JADUs) in compliance with California Government Code Sections 65852.2 and 65852.22, which allows development of ADUs within land zoned for single-family residential. The City also allows ADUs on land zoned for multifamily dwelling residential use. This section establishes the parameters for development including size, height, setbacks, parking requirements, fees and use of ADUs.

Chapter 17.146 Housing Trust Fund, Housing Impact Fee, and Inclusionary/In-lieu Fee Requirements

Section 17.146.050 Residential Development Project—Inclusionary/in-lieu Fee Requirements

A. Inclusionary Requirement. At least twenty percent (20%) of all new dwelling units in a residential development project shall be affordable units, which shall be constructed and completed not later than the related market rate units. For fractions of affordable units, including fractions resulting from construction of less than five dwelling units, the developer may elect, at his or her option, to construct the next higher whole number of affordable units, perform an alternative equivalent action which has received the approval of the city council pursuant to subsection B, or pay the housing in-lieu fee specified in subsection E for such fraction.

B. Alternative Equivalent Proposal.

    1. A developer of any residential project may propose to meet the requirements of subsection A with an alternative equivalent action, subject to the review and approval of the city council. Proposals for alternative equivalent actions may include, but are not limited to, dedication of vacant land, the construction of affordable units on another site, or acquisition and enforcement of required rental/sales price restrictions on existing standard dwelling units consistent with this section. Any proposal shall

show how the alternative action will further affordable housing opportunities in the city to an equal or greater extent than compliance with the express requirements of subsection A or payment of the appropriate in-lieu housing fee.

2. Alternative equivalent action proposals for single-family and multifamily residential developments shall be considered on a case-by-case basis by the city council, and may be approved at the city council's sole discretion, if the city council determines that such alternative will further affordable housing opportunities in the city to an equal or greater extent than compliance with the express requirements of subsection A.

C. In-Lieu Housing Fee. A developer of four or fewer residential dwelling units which are the whole of a residential development project may meet the requirements of subsection A through payment of an in-lieu fee.

A developer of any other residential project may propose to meet the requirements of subsection A through payment of an in-lieu fee by showing good cause that it is not feasible to construct the required units. A written request shall be submitted with the developer's application for a discretionary approval or building permit, whichever comes first. The request shall include: a statement identifying all overriding conditions that prevent the developer from meeting the requirement to construct the affordable units; sufficient independent data, including appropriate financial information, to support the developer's claim that it is not feasible to construct the required affordable units; and a detailed analysis of why the concessions and incentives identified in subsection F cannot mitigate the conditions that are preventing the developer from constructing the affordable units. The housing director shall review all such requests and prepare a recommendation for the city council. Such requests shall be considered on a case-by-case basis by the city council, and may be approved if the council determines that there are overriding conditions which prevent the developer of a multifamily residential project from meeting the requirement to construct affordable units, and that payment of the in-lieu fee will further affordable housing opportunities to an equal or greater extent.

I. Basic Requirements for Owner-Occupied and Rental Affordable Units. Affordable units shall be comparable in number of bedrooms, exterior appearance and overall quality of construction to market rate units in the same residential project. Subject to the approval of the planning commission, square footage of affordable units and interior features in affordable units need not be the same as or equivalent to those in market rate units in the same residential project, so long as they are of good quality and are consistent with contemporary standards for new housing. Affordable units shall be dispersed throughout the residential project, or, subject to the approval of the planning commission, may be clustered within the residential project when this furthers affordable housing opportunities.

Chapter 17.152 Residential Growth Management System

The City's Residential Growth Management System is no longer enforceable because the state passed Senate Bill 330 (see Government Code Section 66300), otherwise known as the Housing Crisis Act of 2019. Government Code Section 66300 includes language that prevents cities from "establishing or implementing any provision that . . . [a]cts as a cap on the number of housing units that can be approved or constructed either annually or for some other period" (Section 66300(b)(1)(D)(ii) [emphasis added]). Therefore, the City can no longer implement a restriction on the number of residential units that can be constructed and this ordinance is no longer enforceable.

3.10.4 Impacts

Methods of Analysis

Section 15125(d) of the CEQA Guidelines, requires than an EIR shall discuss any inconsistencies with applicable general plans, specific plans, and regional plans as part of the environmental setting. Applicable land use plans considered in this analysis include the City's 1993 General Plan, 2015–2023 Housing Element, Zoning Ordinance (Title 17), and ABAG's Metropolitan Transportation Plan/SCS.

The consistency analysis with the 1993 General Plan focuses on potentially significant environmental impacts that would result from a conflict with a policy adopted for the purpose of avoiding or mitigating an environmental effect. Under state law, a development project cannot be approved if it is inconsistent with the General Plan. Ultimately, it is within the City's decision makers' purview to decide if the Proposed Project is consistent with the General Plan. Because policies in a general plan reflect a range of competing interests, the City's decision makers are allowed to weigh and balance the plan's policies when applying them, and have broad discretion to construe its policies in light of the plan's purposes. As previously discussed, a policy consistency analysis with the 2019 General Plan is not included. Even so, generally, the policies in the 2019 General Plan are very similar to the policies contained in the 1993 General Plan. For informational purposes and a brief overview of policies that differ from the 1993 General Plan will be provided.

The Proposed Project's consistency with applicable ordinances are discussed in this section and in other technical sections of this Draft EIR. This section also considers any inconsistencies with ABAG's Metropolitan Transportation Plan/SCS, a regional land use and transportation plan. The analyses of consistency with other planning documents (e.g., regional air quality plans) are provided in the applicable technical sections in Chapter 3 of this Draft EIR.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Physically divide an established community.
- Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Threshold Criteria not Applicable to the Proposed Project

Due to the location and characteristics of the Proposed Project, certain significance criteria are not applicable and therefore, are not considered potential impacts. These criteria are addressed briefly below and are not discussed further in this document.

Physically Divide Established Community

The Project site is undeveloped and generally surrounded by development on the south, southeast and southwest with undeveloped land generally located to the northwest and northeast. The Proposed Project is a Tentative Subdivision Map to develop the site with a residential subdivision consistent with the existing neighborhoods generally located to the southwest and southeast of the site. Due to the Proposed Project's location, development of the Proposed Project would not physically divide an established community because there is no development northwest or northeast of the site. The Proposed Project would, instead, provide a continuation of the existing neighborhood with development of a new residential area. Development of the Project site would not divide an established community (first threshold criteria); therefore, this issue is not further addressed below.

Impacts and Mitigation Measures

3.10-1: Would the Proposed Project conflict with the City's 1993 General Plan policies or other regulations adopted for the purpose of avoiding or mitigating an environmental effect? This impact would be less than significant.

City of St. Helena 1993 General Plan

The Proposed Project includes approval of a Tentative Subdivision Map to develop a vacant site with residential uses consistent with the underlying land use designation and zoning that would provide a diversity of housing choices, including single family residences, ADUs, and attached multifamily units. Currently the site is designated as MDR in the City's 1993 General Plan and

the Proposed Project is not requesting a General Plan Amendment to redesignate the existing land use designation.

General Plan Guiding policies 2.6.1 through 2.6.4 support infill development within the City's Urban Service Area and growth in existing urbanized areas where City services are in place to support new development. Policy 2.6.4 encourages infill development and higher densities to minimize the need to expand the City's Urban Services Area. Implementing policy 2.6.6 limits land designed for urban uses to areas that can reasonably be predicted to be developed. Areas not slated for urban development shall be designated for non-urban uses. The Project site is located within the City's Urban Limit Line and Urban Services Area within a few blocks of downtown St. Helena adjacent to existing residential uses and infrastructure where City services are available. The site has been designated and zoned for residential development for over 25 years and has access to City services.

Policies 2.6.9 and 2.6.10 and the City's Residential Growth Management System (Municipal Code Chapter 17.152) limit the City's approval of residential units and imposes a cap on the total number of residential units to 2,850 Citywide by 2010. These policies were included in the General Plan to slow growth in order to ensure that the diverse housing needs of the community are met, development of new housing occurs in designated areas, and to ensure adequate public facilities and services are available to support new residential development. Due to passage of SB 330 otherwise known as the Housing Crisis Act of 2019, the City's Residential Growth Management System that limits residential development is no longer enforceable so consistency with these policies would not apply to this Proposed Project.

Policies 2.6.14 through 2.6.21 are focused on residential development and encourage a mix of housing types, densities and price ranges consistent with the scale and character of existing neighborhoods; encourage higher density in single family neighborhoods keeping the same development character; minimize large lot development and encourage "planned unit developments" to complement existing community character; minimize blocking views of surrounding vineyards; and encourage new residential projects to facilitate alternative transportation modes. The Proposed Project applicant is only requesting approval of a Tentative Subdivision Map at this time. Therefore, no design details are included as part of this Proposed Project. The Proposed Project applicant would require additional subsequent approvals from the City including design review, site development plan and a use permit (to construct attached multifamily units in the MDR district) in order to engage in any construction of new residences.

The Tentative Subdivision Map includes 51 single-family lots and a 3.4-acre parcel to include 25 attached multifamily units, reflecting a mix of housing types. In addition, 11 of the 51 single-family lots would include an ADU. Therefore, the Proposed Project's proposed density would be 5.1

dwelling units/acre, assuming a total of 87 units. (Section 17.116.030 of the Zoning Ordinance does allow ADUs to exceed maximum density provided there is only one ADU per parcel).

The Proposed Project provides sidewalks on all interior roads to encourage walking and bike access throughout the Project site. The existing vineyard on the Project site occupies approximately 6.8 acres and would be removed with the exception of a small portion of the vineyard (approximately 1 acre) that would remain located in the southwestern "panhandle" portion of the site. Currently there are no views of other existing vineyards in the existing agricultural lands to the north, northeast and northwest that could be blocked by residential development (see also Section 3.1 for a discussion of visual impacts and related policies).

The Proposed Project would not conflict with the City's 1993 General Plan policies related to environmental protection and would not result in a significant environmental effect related to land use plan consistency. The impact is **less than significant.**

2019 General Plan ("General Plan Update 2040")

As noted previously, the Proposed Project is not required to demonstrate consistency with the City's adopted 2019 General Plan Update because it was not adopted when the Proposed Project application was filed and deemed complete in 2011. In general, the 2019 General Plan goals and policies are very similar to the goals and policies included in the 1993 General Plan. The notable differences include that the 2019 General Plan eliminates the Urban Service Area and updates the Urban Limit Line, and designates Urban Reserve Areas (which can only be considered for development if there is no developable land within the Urban Limit Line). The 2019 General Plan Update also supports agricultural and low-intensity uses beyond the Urban Limit Line (Policy LU1.3), and allows an exception for on-site employee housing to be developed on agricultural lands outside of the Urban Limit Line (Policy LU1.2**)**. Overall, the intent of the policies to discourage urban sprawl by containing urban development within the Urban Limit Line and designated areas is consistent with the policy direction provided in the 1993 General Plan. The Proposed Project is consistent with the intent of the 2019 General Plan land use policies to discourage sprawl and to develop areas within the Urban Limit Line.

Housing Element Update 2015-2023 Goals, Policies, and Eight-Year Action Plan

The City's Housing Element includes goals and policies that address the need for the City to provide a diversity of housing and to use land efficiently in creating livable neighborhoods. The Proposed Project includes a mix of single-family residences and ADUs as well as 25 multifamily affordable units, designated for Very Low-income (5 units) and the Moderate-income category (20 units). The inclusion of a mix of housing units meets the intent of Goal 1 and policies HE1.3, HE2.4, and HE2.6 which encourages the development of a variety of housing in the City, including affordable units and second, or accessory units.

The Project site is located within the City's Urban Limit Line and as discussed above, has been designated for residential development for over 25 years, since 1993. The Project site is included in the vacant land inventory in the Housing Element. The site is located adjacent to residential development to the south, southwest and east and is adjacent to the limit of the City's Urban Limit Line. To ensure the protection of agricultural lands to the north, northeast/northwest, the City has zoned the Project site for MDR which allows a higher density. This encourages more compact development in order to limit encroaching into lands farther away from existing infrastructure and services. Given its location adjacent to existing development, the Project site is served by existing infrastructure including roads, water, sewer, and storm drain and is within a short walk of downtown St. Helena and the City Library. These factors contribute to meeting the intent of policies HE2.1 and HE2.2, which encourage higher density housing to protect agricultural lands and to encourage a balance of housing types (Goal 2). Overall, the Proposed Project is consistent with the City's Housing Element and the impact is **less than significant.**

City of St. Helena Zoning Ordinance

A zoning designation applied to the Project site must be consistent with the General Plan and the anticipated uses of the site. The proposed land uses and density of the Proposed Project is consistent with the 1993 General Plan (and 2019 General Plan) MDR land use designation and MR zoning.

Chapter 17.152 of the Zoning Ordinance implements the City's Residential Growth Management System, intended to regulate residential growth of the City to approximately 2% per year. As stated previously this imposes a cap on the total number of residential units to 2,850 Citywide by 2010 (included as Implementing Policy 2.6.11 of the 1993 General Plan). However, the City's Residential Growth Management System is no longer enforceable due to the passage of SB 330 (see Gov't Code Section 66300) otherwise known as the Housing Crisis Act of 2019. This act prevents cities from establishing or implementing any provision that imposes a limit on the number of housing units that can be approved or constructed annually or for some other period. Therefore, as the City can no longer implement a restriction on the number of residential units that can be constructed, the Proposed Project does not have to be consistent with this chapter of the Zoning Ordinance.

The Tentative Subdivision Map includes a 3.4-acre lot (Lot 52) designated for 25 multifamily affordable housing units and also proposes to develop 11 ADUs consistent with Section 17.116.030 of the Zoning Ordinance. The City would enter into an Affordable Housing Agreement in conjunction with the approval of the Tentative Subdivision Map. The Tentative Subdivision Map and the Proposed Project's Affordable Housing Agreement must be consistent with the City's Housing Trust Fund, Housing Impact Fee, and Inclusionary/In-lieu Fee

Requirements (Chapter 17.146). Under Section 17.146.050(g)(2), if "the developer is required to build four or more units of affordable housing, the number of affordable units which are required to be constructed in very low, low or moderate units shall be determined by the ratio of units needed in each of those categories in order to satisfy the City's fair share housing goals." Per the City's Regional Housing Needs Allocation, the Proposed Project's multifamily rental units should be rented to 25% very low-income households, 17% low income households, and 21% moderate income households. The Proposed Project is proposing moderate and very low-income restricted units, with no units designated for low income single-family houses as required by the City's inclusionary housing requirements. Additionally, Section 17.146.050(I) states that affordable units should be comparable in number of bedrooms with an exterior appearance consistent with a project's market rate housing and be dispersed throughout a project site. As proposed, the ADUs would not have a comparable number of bedrooms to the market rate units, and the 25 multifamily affordable housing units would be located on a single 3.4-acre parcel (Lot 52) with 11 ADUs scattered throughout the other 51 single-family lots. Because these units are not comparable to the proposed single-family units in number of bedrooms and are not dispersed throughout the site the Proposed Project would be required either develop an alternative equivalent proposal or pay an in-lieu fee, both of which require approval by the City Council.

As indicated previously, the Proposed Project applicant is only requesting approval of a Tentative Subdivision Map at this time. The map is consistent with the development standards of the MR zoning district. Note that only the lot configuration of the proposed subdivision can be assessed at this time; individual structures must comply with the MR development standards, including setbacks, height and lot coverage, at the time those applications are submitted. In addition, as noted in Chapter 2, Project Description, the Proposed Project would also be subject to the City's design review process. Future construction of the attached multifamily units would require approval of a conditional use permit.

If the Proposed Project is approved, additional discretionary and ministerial approvals would be required including design review and a conditional use permit for the multifamily housing. This would require the Proposed Project applicant to demonstrate compliance with specifics of the Zoning Ordinance as well as the City's Municipal Code. Because the approvals the applicant is requesting at this time are consistent with the City's Zoning Ordinance the impact is **less than significant.**

Plan Bay Area 2040

The Plan Bay Area 2040 is the Regional Transportation Plan and SCS for the nine-county San Francisco Bay Area, which includes Napa County. The Plan assumes development of the Project site with residential uses, consistent with the City's 1993 (and 2040 General Plan) land use designation, and due to its location near downtown, it is consistent with the goal of SB 375 to reduce greenhouse gas emissions from cars and light trucks by developing new uses near

existing infrastructure and alternative transportation choices. The Proposed Project as proposed is consistent with the Plan Bay Area 2040 and the impact is **less than significant.**

Mitigation Measures

None required.

3.10.5 Cumulative Impacts

The land use analysis in an EIR does not typically include a discussion of cumulative impacts because the consistency analysis for applicable land use goals and policies is not an additive effect.

3.10.6 References

Association of Bay Area Governments. 2017. Plan Bay Area 2040 Draft Environmental Impact Report. April 2017.

City of St. Helena. 1993. City of St. Helena 1993 General Plan. September 28, 1993.

City of St. Helena. 2019. City of St. Helena General Plan Update 2040. May 2019.

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3.11 NOISE AND VIBRATION

3.11.1 Introduction

This section presents potential noise and vibration impacts of the proposed Hunter Subdivision Project (Proposed Project), which includes the environmental setting and existing ambient noise conditions, regulatory framework, potential short-term and long-term noise and vibration impacts, and proposed measures to mitigate any identified significant impacts.

A total of four comments were received that raised concerns regarding noise and vibration in response to the Notice of Preparation. Two of the comments stated that noise associated with the Proposed Project was a concern; one comment indicated that construction noise needed to be evaluated; the final comment pointed out the presence of a senior residential development in the vicinity of the Project site, and as such it was important to maintain peace and quiet in the area. Concerns regarding noise are addressed in this section. A copy of the Notice of Preparation and comments received is included in Appendix A.

Information contained in this section is based on the proposed tentative map, the Federal Highway Administration (FHWA) Roadway Construction Noise Model and the FHWA Traffic Noise Model (TNM 2.5) used to estimate Proposed Project noise emissions, the California Department of Transportation's Technical Noise Supplement to the Traffic Noise Analysis Protocol (Caltrans 2013), and Federal Transit Authority (FTA) Transit Noise And Vibration Impact Assessment (FTA 2006). The analysis is based on noise and vibration modeling, which can be found in Appendix I. Other sources consulted are listed in Section 3.11.6, References.

3.11.2 Environmental Setting

Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Frequency, or pitch, is a physical characteristic of sound and is expressed in units of cycles per second or hertz. The normal frequency range of hearing for most people extends from about 20 to 20,000 hertz. The human ear is more sensitive to middle and high frequencies, especially when the noise levels are quieter. As noise levels get louder, the human ear starts to hear the frequency spectrum more evenly. To accommodate for this phenomenon, a weighting system to evaluate how loud a noise level is to a human was developed. The frequency weighting called "A" weighting is typically used for quieter noise levels which de-emphasizes the low frequency components of the sound in a manner similar to the response of a human ear. This A-weighted sound level is called the "noise level" and is referenced in units of dBA.

Since sound is measured on a logarithmic scale, a doubling of sound energy results in a 3 dBA increase in the noise level. Changes in a community noise level of less than 3 dBA are not typically noticed by the human ear. Changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA increase is readily noticeable (EPA 1973). The human ear perceives a 10 dBA increase in sound level as a doubling of the sound level (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear).

An individual's noise exposure occurs over a period of time; however, noise level is a measure of noise at a given instant in time. Community noise sources vary continuously, being the product of many noise sources at various distances, all of which constitute a relatively stable background or ambient noise environment. The background, or ambient, noise level gradually changes throughout a typical day, corresponding to distant noise sources, such as traffic volume, as well as changes in atmospheric conditions.

Noise levels are generally higher during the daytime and early evening when traffic (including airplanes), commercial, and industrial activity is the greatest. However, noise sources experienced during nighttime hours when background levels are generally lower can be potentially more conspicuous and irritating to the receiver. To evaluate noise in a way that considers periodic fluctuations experienced throughout the day and night, a concept termed "community noise equivalent level" (CNEL) was developed, wherein noise measurements are weighted, added, and averaged over a 24-hour period to reflect magnitude, duration, frequency, and time of occurrence. A complete definition of CNEL and other terminology used to describe noise is provided in Table 3.11-1.

Exterior Noise Distance Attenuation

Noise sources are classified in two forms: (1) point sources, such as stationary equipment or a group of construction vehicles and equipment working within a spatially limited area at a given time, and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites and at a rate of 7.5 dBA for each doubling of distance from source to receptor at acoustically "soft" sites. Sound generated by a line source (i.e., a roadway) typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling distance, for hard and soft sites, respectively. Sound levels can also be attenuated by man-made or natural barriers. For the purpose of the sound attenuation discussion, a "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete ground surfaces, as well as very hard-packed soils. An acoustically "soft" or absorptive site is characteristic of unpaved loose soil or vegetated ground.

Table 3.11-1
Definitions of Acoustical Terminology

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of two like quantities
Sound Pressure Level (SPL)	10 times the logarithm to the base 10 of the ratio between the square of the sound to the square of the reference sound pressure of 20 μPascals. Sound pressure level is the quantity that is directly measured by a sound level meter and expressed in dB.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 hertz and 20,000 hertz.
A-Weighted Sound Level (dBA)	SPL in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de- emphasizes low and high frequency components of frequency components of sound in a manner similar to the frequency response of the human ear and correlates well with subjective response to sound. All sound levels in this report are A-weighted.
Noise	Unwanted sound.
Equivalent Sound Level (Leq)	The average A-weighted sound level during the measurement period. For this CEQA evaluation, Leq refers to a one-hour period unless otherwise stated.
Lmax, Lmin	The maximum and minimum A-weighted sound level during the measurement period.
L01, L10, L50, L90	The A-weighted sound levels that are exceeded l%, l0%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level (Ldn)	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured during the night between l0 pm and 7 am.
Community Noise Equivalent Level (CNEL)	The average A-weighted sound level during a 24-hour day, obtained after addition of S decibels in the evening from 7 p.m. to l0 p.m. and after addition of l0 decibels to sound levels during the night between l0 p.m. and 7 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Impulsive Noise	Noise loud enough to disrupt normal activities and usually lasting less than one second.

Source: St. Helena General Plan 1993.

Fundamentals of Vibration

Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. The response of humans to vibration is very complex. However, it is generally accepted that human response is best approximated by the vibration velocity level associated with the vibration occurrence.

Heavy equipment operation, including stationary equipment that produces substantial oscillation or construction equipment that causes percussive action against the ground surface, may be perceived by building occupants as perceptible vibration. It is also common for ground-borne vibration to cause windows, pictures on walls, or items on shelves to rattle. Although the

perceived vibration from such equipment operation can be intrusive to building occupants, the vibration is seldom of sufficient magnitude to cause even minor cosmetic damage to buildings.

When evaluating human response, ground-borne vibration is usually expressed in terms of root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. As for sound, it is common to express vibration amplitudes in terms of decibels defined as:

$$L_v = 20 \log \left(\frac{v_{rms}}{v_{ref}} \right)$$

Where v_{rms} is the RMS vibration velocity amplitude in inches/second and v_{ref} is the decibel reference of 1x10-6 inches/second.

To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. The vibration threshold of perception for most people is around 65 VdB (which is equivalent to 0.0018 inches per second RMS). Vibration levels in the 70 to 75 VdB range are often noticeable, but generally deemed acceptable, and levels in excess of 80 VdB are often considered unacceptable (FTA 2006).

Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass, expressed as inches per second). Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving and soil compacting, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used. A conservative maximum vibration level standard is 0.2 inches per second PPV for the prevention of structural damage to typical residential buildings (Caltrans 2013).

Existing Noise Conditions

Project Site Noise Levels

The Project site is currently vacant land with a small vineyard area. The area surrounding the Project site is a mix of agricultural, residential, commercial offices, and open space. Residential properties are located adjacent to the south, southeast, and east of the Proposed Project, as well as approximately 500 feet to the west; the closest existing residences (including mobile homes) are located at distances from 20 feet to 65 feet from the property boundaries. A new single-family residence is currently under construction just west of the Project site. Commercial offices are located at the terminus of Adams Street (approximately 650 feet to the south) and a

preschool is located along Adams Street to the south of the offices (approximately 950 feet to the south of the Proposed Project boundary).

The ambient or existing noise environment is described on the basis of 24-hour measurements completed in the vicinity of the Project site. Existing noise levels were measured at the Project site boundaries in order to establish baseline noise conditions against which to compare Proposed Project operational noise levels, as shown in Figure 3.11-1, Noise Measurement Locations. A total of three 24-hour noise measurements were performed, one apiece on the southern, western, and northern property boundaries. Sound-level measurements were performed using SoftdB Piccolo 3 Models (ANSI Type II). American National Standards Institute (ANSI) Type II sound-level meters have sufficient accuracy to be used for environmental noise evaluation. The sound-level meters were calibrated before and after the 24-hours measurements using a Larson Davis Model CAL150 calibrator.

Table 3.11-2 summarizes the dates and start/stop times for each 24-hour measurement, as well as the calculated 24-hour weighted average noise level (CNEL). See Appendix I for data tables for each of the 24-hour measurement periods and the calculation of CNEL from the recorded hourly average values.

Table 3.11-2
Existing Ambient Noise Measurement Results

Location	Dates	Start Time	Stop Time	CNEL (dBA)
Southeast Property Boundary	10/16/2018 to 10/17/2018	11 AM	11 AM	48
Western Property Boundary				50
Northeast Property Boundary				52

Source: Dudek 2018.

Existing noise levels on site, and immediately adjacent to neighboring residential land uses, are well within the City's exterior noise exposure limit of 60 dBA CNEL for residential land uses (Refer to Section 3.11.3 – Local).

3.11.3 Regulatory Setting

Federal

Federal Highway Administration Standards

Code of Federal Regulations (CFR) Title 23, Part 772 sets procedures for the abatement of highway traffic noise and construction noise. Title 23 is implemented by the Federal Department of Transportation FHWA. The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply

noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. All highway projects which are developed in conformance with this regulation shall be deemed to be in conformance with the Department of Transportation FHWA Noise Standards. Title 23 establishes a 67 dBA L_{eq}(h) standard applicable to federal highway projects for evaluating impacts to land uses including residences, recreational uses, hotels, hospitals, and libraries (23 CFR Chapter 1, Part 772, Section 772.19).

Federal Transit Administration and Federal Railroad Administration Standards

Although the FTA standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the FTA's Transit Noise and Vibration Impact Assessment Manual (FTA 2006) are routinely used for projects proposed by local jurisdictions. The FTA and Federal Railroad Administration have published guidelines for assessing the impacts of ground-borne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 inches per second perturbation projection vector (PPV).

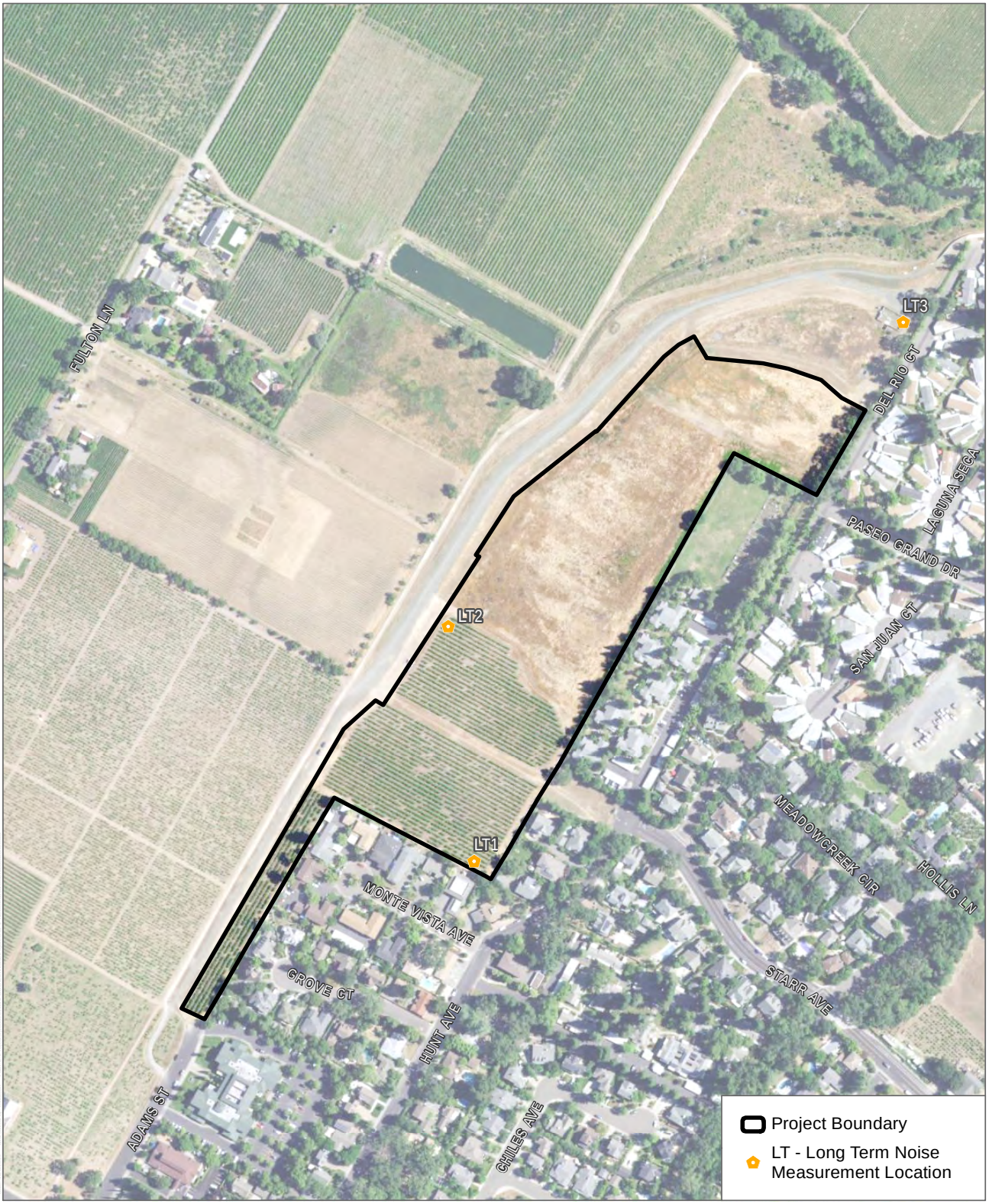
State

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (CCR Title 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multi-family residential buildings (CCR Title 24, Part 2). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure is proposed to be located in an area with CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dBA (California's Title 24 Noise Standards, Chap. 2-35).



SOURCE: Digital Globe 2017, Napa County 2015

DUDEK 0 160 320 Feet

FIGURE 3.11-1

Noise Measurement Locations

Hunter Subdivision Project

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Local

City of St. Helena 1993 General Plan

The Public Health and Safety Element of the City of St. Helena 1993 General Plan (City of St. Helena 1993) provides guiding and implementing policies regarding noise management, including the following:

> **Policy 8.3.1:** Maintain a city-wide noise environment that balances various City objectives while minimizing the impact of highway, railroad, and industrial noise on the public, while recognizing the agricultural basis of the community.
>
> **Policy 8.3.2**: Discourage noise-sensitive land uses from locating in areas with inappropriate or high noise levels based on the land use compatibility guidelines, interior noise level criteria, and the noise contour maps.
>
> **Policy 8.3.3**: Require new residential developments to implement noise mitigation measures when built in close proximity to noise sources such as Highway 29, the railroad tracks, and the Harold Smith & Sons gravel quarry. These developments should consider the resulting exterior as well as interior noise environment.
>
> **Implementing Policy 8.3.5:** Continue to consider the environmental impact of transportation-related noise and other noise sources in the review and approval of subdivision plans and requests for changes in the zoning ordinance.
>
> **Implementing Policy 8.3.6**: Adopt the Title 24 interior noise level standard of 45 dBA, Ldn in all habitable rooms for all dwelling units. Adopt a maximum allowable noise level standard of 60 dBA Ldn for residential exterior activity areas such as patios, back yards or recreational areas.
>
> I**mplementing Policy 8.3.11**: Require construction operations to use noise suppression devices and techniques and limit noisy construction activities to the least noise sensitive times (8 am to 5 pm, Monday through Friday).

The Public Health and Safety Element also prescribes recommended maximum exterior noise exposure levels for each land use, as presented in Table 3.11-3.

Table 3.11-3
Noise/Land Use Compatibility Guidelines

Land Use Category	Completely Compatible [a]	Tentatively Compatible [b]	Normally Incompatible [c]	Completely Incompatible [d]
Residential	< 55	55 to 60	60 to 75	75 >
Commercial/Office	< 65	65 to 75	75 to 80	80 >
Industrial/Agriculture	< 70	70 to 80	80 to 85	85 >
School/Library/Hospital	< 65	65 to 70	70 to 80	80 >
Playground, Park	< 67	67 to 70	70 to 75	75 >

Notes:

[a] Completely Compatible: the noise exposure is such that both the indoor and outdoor environments are pleasant, as long as noise sources do not cause the ambient noise to increase more than 5 dBA, and in the absence of intrusive and intermittent noise.

[b] Tentatively Compatible: the noise exposure is great enough to be of concern, but common building construction practices will make the living indoor environment acceptable, even for sleeping quarters, and the outdoor environment will be reasonably pleasant for recreation and play.

[c] Normally Incompatible: the noise exposure is so severe that unusual and costly building construction is necessary to ensure some tranquility inside one's home, and barriers must be erected between the site and prominent noise sources to make the outdoor environment tolerable.

[d] Completely Incompatible: the noise exposure at the site is so severe that construction costs to make the indoor living environment acceptable would be prohibitive and the outdoor environment would still be intolerable.

Source: 1993 St. Helena General Plan.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The Public Health and Safety Element of the City of St. Helena 2019 General Plan (City of St. Helena 2019) provides guiding and implementing policies regarding noise management, including the following:

> **Policy PS2.1:** Preserve the current low levels of noise in St. Helena to maintain the City's rural atmosphere.
>
> **Policy PS2.2**: Maintain a citywide environment that balances various City objectives while minimizing the impact of highway, railroad, and industrial noise. The City should manage both indoor and outdoor noise levels to protect health and safety. A combination of noise standards and existing noise levels should be used to determine impacts and mitigation measures.
>
> **Policy PS2.3**: Minimize potential noise impact conflicts between land uses by regulating incompatible land uses. Encourage noise-generating uses to reduce their impacts while promoting land use patterns that avoid conflicts. Employ compatibility guidelines, interior noise level criteria, the City's noise standards, and noise contour maps to determine the compatibility of land uses.

Policy PS2.4: Require a reduction and/or control of the use of machinery, mechanical systems and other noise-making equipment and sources in and near residential areas where the noise impacts would be considered intrusive to adjacent residential property, unless consistent with the right-to-farm.

Policy PS2.5: An increase in average noise levels of 5 dBA or greater is considered to be significant and to constitute a noise impact by the noise source in question for the purpose of environmental analyses.

The Public Health and Safety Element also prescribes the same recommended maximum exterior noise exposure levels for each land use, as previously presented in Table 3.11-3.

St. Helena Municipal Code

The St. Helena Municipal Code, Chapter 8.24 of Title 8, the Health and Safety Code, specifies unnecessary noise which can be heard outside of any building by attaching any noise-producing attachment to any vehicle; or blowing or ringing any horn, whistle or bell; by operating a loudspeaker, public address system or sound amplification system; or by making any other loud or unusual noise which disturbs the peace of any other person would violate the ordinance unless permitted by the Chief of Police. Similarly, noise generated by commercial activities between the hours of 10.00 p.m. and 7:00 a.m. that can be heard at the property line of any parcel is prohibited, unless permitted by the Chief of Police.

Construction activities are limited to the hours between 8:00 a.m. and 5:00 p.m. Monday through Saturday. Construction is not allowed on Sundays and holidays (federal and local) if noise can be heard at the property line of any parcel of real property within the city limits. Delivery of materials/equipment and cleaning and servicing of machines/ equipment are limited to between 7:00 a.m. and 6:00 p.m.

3.11.4 Impacts and Mitigation Measures

Methods of Analysis

The analysis of existing and future noise environments is based on observations, noise level measurements, and computer modeling (model output data is included in Appendix I). Existing noise levels were monitored at selected on-site and off-site locations using ANSI Type II sound level meters for general environmental noise measurement instrumentation. Traffic noise modeling involved the calculation of existing and future traffic noise levels along roadway sections where the Proposed Project would contribute additional vehicle trips, as provided in the Proposed Project's traffic report (Appendix K), using the FHWA model. Vibration from transportation sources was not

evaluated in detail because it is not common for vibration from motor vehicles traveling on paved roads to cause disturbance or substantial annoyance in these areas.

Construction Noise and Vibration

Construction noise levels were determined using the FHWA's Roadway Construction Noise Model. For construction noise, this analysis assumed that compliance with conditions specified in the City's Noise Ordinance. Specifically, limiting construction to the hours of 8 a.m. to 5 p.m., Monday through Saturday, and prohibit construction activities on Sunday and holidays. For construction vibration, this analysis uses the FTA thresholds for structural damage (vibration-peak-particle velocities greater than 0.2 inches per second) and FTA's threshold for human annoyance within residences (80 VdB at residences where people normally sleep, for infrequent events).

For the purposes of noise modeling, it was conservatively assumed that construction of the Proposed Project would occur over a period of approximately 6 years. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the Proposed Project applicant and CalEEMod-generated default values. Complete detailed construction assumptions are included in Appendix I. Implementation of the Proposed Project would include construction of 87 residential units including 51 single-family residences, 11 accessory dwelling units, and 25 multi-family units.

As described in Chapter 2, Project Description, the Proposed Project would grade an approximately 17-acre site. Some soil export would be required to balance the site. Soil balance would occur within each subset area and hauling would not be required between subset areas. Balancing activities are anticipated to be performed through the use of off-road construction equipment (e.g., excavators, graders, dozers, and scrapers). The construction equipment mix used for estimating the construction noise emissions of the Proposed Project is shown in Table 3.11-4. Notably, because detailed specific information regarding the construction equipment fleet is unknown at the time of analysis, the analysis is based on the default construction equipment fleet provided by CalEEMod.

Table 3.11-4
Construction Equipment List by Phase

Construction Phase	Equipment	Quantity
Site Preparation	Rubber Tired Dozers	3
	Tractors/Loaders/Backhoes	4
Grading	Excavators	2
	Graders	1
	Rubber Tired Dozers	1
	Scrapers	2

Table 3.11-4
Construction Equipment List by Phase

Construction Phase	Equipment	Quantity
	Tractors/Loaders/Backhoes	2
Paving	Pavers	2
	Paving Equipment	2
	Rollers	2
Building Construction	Cranes	1
	Forklifts	3
	Generator Sets	1
	Tractors/Loaders/Backhoes	3
	Welders	1
Architectural Coating	Air Compressors	1

Source: See Appendix I for details.

Thresholds of Significance

Consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Generation of excessive groundborne vibration or groundborne noise levels.
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

Noise Significance Criteria Applicable to the Proposed Project

Based on the City's 1993 General Plan Public Safety Element and Municipal Code (Chapter 8.24), as well as standards adopted by other agencies that are customarily applied to the assessment of short-term noise generation, the Proposed Project would have a significant impact on noise if it would result in:

- Construction, between the hours 8:00 a.m. and 5:00 p.m. Monday through Saturday, construction noise levels greater than 90 dBA Leq at any vicinity residence (FTA 2006). Also, any noise generating construction activities occurring between 5:00 p.m. and 8 a.m. weekdays and Saturdays, or any time on Sundays or holidays (St. Helena 1993).

- Construction, the exposure of existing structures in the Proposed Project vicinity to vibration levels exceeding 0.2 inches per second PPV, or exposure of residents to vibration levels of 80 VdB in residences where people normally sleep, for infrequent events (FTA 2006).
- Proposed Project operation, generation of noise in excess of 60 dBA Ldn at the property line for any existing residential properties in the Proposed Project vicinity (St. Helena 1993).
- Proposed Project operation, an increase of 3 dBA CNEL or more in existing roadway traffic noise levels, as a result of the addition of Proposed Project generated traffic on vicinity roadways (Caltrans 2013).

Threshold Criteria not Applicable to the Proposed Project

Due to the location and characteristics of the Proposed Project, certain significance criteria are not applicable and therefore, are not considered potential impacts. These criteria are addressed briefly below and are not discussed further in this document.

Airports/Airport Land Use Plan

The Project site is not located within two miles of an airport, the closest airport is Angwin-Parrett Field airport approximately 4.5 miles north-northeast of the Project site. Therefore, future residents would not be exposed to elevated noise levels from aircraft operation and airport noise issues (last significance threshold listed above) are not addressed further in the analysis.

Impacts and Mitigation Measures

3.11-1: Would the Proposed Project result in a temporary (short-term) increase in construction noise levels that would cause a substantial increase in ambient noise levels and exceed City standards? This impact would be potentially significant.

Construction of the Proposed Project would generate noise that could expose nearby receptors (residences) to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures. Noise from construction equipment generally exhibits point source acoustical characteristics. A point source sound is attenuated (or reduced) at a rate of 6 dB per doubling of distance from the source for “hard site” conditions and at 7.5 dB per doubling of distance for “soft site” conditions. These rules apply to the propagation of sound waves with no obstacles between source and receivers, such as topography (ridges or berms) or structures. The range of maximum noise levels for various types of construction equipment is provided in Table 3.11-

5. Typical operating cycles may involve two minutes of full power, followed by 3 or 4 minutes at lower levels.

Table 3.11-5
Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (dB) - 50 feet from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Loader	85
Paver	89
Pneumatic Tool	85
Pump	76
Roller	74
Saw	76
Scraper	89
Truck	88

Source: FTA 2006.

Whereas Table 3.11-5 shows the noise level of individual pieces of equipment, the noise levels shown in Table 3.11-6 take into account operation of multiple pieces of construction equipment simultaneously, and lists the typical overall noise levels that would be expected for each phase of construction. These noise levels are based on surveys conducted by the United States Environmental Protection Agency in 1971. In the time since 1971, regulations have been enforced to improve noise generated by certain types of construction equipment to meet worker noise exposure standards. Also, because of stringent air quality emissions standards, newer, cleaner, and quieter heavy equipment is used on most construction projects in California. Thus, construction phase noise levels indicated in Table 11.3-6 represent “worst-case” conditions. As the table shows, the highest noise levels are expected to occur during the grading/excavation and building construction phases of construction.

Table 3.11-6
Outdoor Construction Noise Levels by Phase

Construction Phase	Adjacent Residence at 20 Feet (dBA L_{eq})	Adjacent Mobile Home Park at 65 Feet (dBA L_{eq})	Acoustic Center at 97 Feet (dBA L_{eq})
Site Preparation	92	82	79
Grading/Excavation	95	85	81
Building Construction	94	84	80
Paving	89	79	75
Finishing	82	71	68

Notes: dBA = A-weighted decibel; L_{eq} = energy equivalent sound level.
Source: Roadway Construction Noise Model, see Appendix I.

As shown in Table 3.11-6, construction-related noise levels could reach up to 95 dBA L_{eq} at residential property lines to the east of the Project site. The City exempts construction activity noise from standard exterior noise exposure limits, if conducted during specific limited daytime hours. The City's Health and Safety Code (Chapter 8.24 of Title 8, the Health and Safety Code) requires noise generating construction activities (including demolition, excavation, and building construction), be restricted to the hours between 8:00 a.m. and 5:00 p.m., Monday through Saturday, and prohibited on Sunday and holidays (City of St. Helena Chapter 8.24). This ensures that sensitive receptors are not disturbed by early morning or late night activities. However, the City's 1993 General Plan includes Implementing Policy 8.3.11, which states "Require construction operations to use noise suppression devices and techniques and limit noisy construction activities to the least noise sensitive times (8 a.m. to 5 p.m., Monday through Friday)." Due to the proximity of residences to the Project site and the potential for construction noise to be an annoyance, as well as the closest adjacent offsite residence potentially being exposed to levels exceeding 90 dBA L_{eq} for the first three construction phases and thus greater than the FTA guidance threshold, the impact is considered **potentially significant.**

Mitigation Measures

Mitigation Measure NOI-1 would substantially lessen construction noise upon adjacent residences by requiring administrative controls, engineering controls, and/or installation of sound abatement. Installation of an effectively placed storage container or a temporary plywood or blanket barrier on a portion of the site boundary that blocks line-of-sight between the source(s) of noise emission and the receptor of concern (e.g., residence) would be expected to provide a minimum of 3-5 dBA of noise reduction. By way of examples, doubling the distance of an operating generator from a receptor would be expected to yield a 6 dB reduction in noise. Proper engine mufflers installed on construction equipment helps ensure that source sound emission levels are further reduced. Implementation of Mitigation Measure NOI-1 would help minimize construction noise impacts to less than significant.

NOI-1: The Project applicant or its contractors shall implement the following for onsite noise control and sound abatement means that, in aggregate, would yield sufficient construction noise reduction during the site preparation, grading/excavation and building construction phases of the Project to ensure compliance with the FTA-based guidance standard of 90 dBA hourly Leq at or beyond the property lines of the nearest residences, as noted.

Administrative Controls – At all times during site preparation and construction:

- Comply with Chapter 8.24 of the Municipal Code with respect to allowable construction periods,
- Minimize idling time of onsite equipment, and
- Either locate onsite stationary construction equipment (such as generators or air compressors) as far from adjacent residential property boundaries as is feasible, or place this equipment inside an approved noise-attenuating casing (e.g., sound-attenuated air intakes and heat vents, exhaust mufflers, etc.), or place this equipment indoors.

Engineering Controls – All mobile and stationary construction equipment employing an internal combustion engine shall be equipped with suitable exhaust and intake silencers which are in good working order; and

Install Sound Abatement – During site preparation and construction which involves the operation of more than two pieces of heavy equipment (dozer, backhoe, front-end loader, crane, tractor, etc.) for at least one hour and when operating within 25 feet of the exterior of a residence (either offsite or onsite), do the following:

- Erect a temporary barrier (i.e., plywood sheet) or install sound blankets (or comparable temporary solid barriers) on the Project's construction fencing, or
- Locate sound path intervening containers or trailers onsite to block direct line-of-sight between residences and the operating heavy equipment.

3.11-2: Would the Proposed Project expose existing residential areas to excessive vibration due to project construction? This impact would be less than significant.

During site clearing, grading and construction activities for the Proposed Project groundborne vibration would be produced by heavy-duty construction equipment. The most important

equipment relative to generation of vibration, and the vibration levels produced by such equipment, is illustrated in Table 3.11-7.

Table 3.11-7
Vibration Velocities for Typical Construction Equipment

Equipment	PPV at 25 Feet (Inches Per Second)	Approximate Ground Vibration Level 25 feet (VdB)
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Drill Rig / Auger	0.089	58
Jackhammer	0.035	87
Small Bulldozer	0.003	79

Source: FTA 2006.

As shown in Table 3.11-7, use of heavy equipment (e.g., large bulldozer) generates vibration levels of 0.089 inches per second PPV at a distance of 25 feet. The City's 1993 General Plan Public Safety Element and Municipal Code (Chapter 8.24) requires limiting the exposure of existing residences to vibration levels exceeding 0.2 inches per second PPV, or exposure of residents to vibration levels of 80 VdB in residences where people normally sleep. The nearest residences to the Project site would be approximately 50 feet from ground disturbance from structural foundations and could experience vibration levels of 0.04 inches per second PPV. Vibration levels at these receptors would not exceed the FTA building damage threshold of 0.2 inches per second PPV. A large bulldozer has a vibration level of 87 VdB measured at 25 feet, at the nearest residences (50 feet) this level would be attenuated to approximately 78 VdB, which is less than the FTA's threshold of 80 VdB. Vibration between 70 and 80 VdB could be noticeable but is generally not considered annoying or destructive. As such, construction-related vibration associated with the Proposed Project would result in a **less-than-significant impact.**

Mitigation Measures

None required.

3.11-3: Would the Proposed Project generate a substantial temporary or permanent operational increase in noise that would exceed City standards? The impact would be less than significant.

Stationary Sources

Operational noise sources for residential areas typically include heating, ventilation, and air conditioning (HVAC) equipment and landscape maintenance activities. Landscape maintenance activities involve short-term noise generation events that do not typically have the potential to

increase the ambient noise levels when referring to the 24-hour L_{dn} metric (which is referenced in the City's Public Safety Element policies). These activities would also not be dissimilar in intensity or character from landscape maintenance activities occurring at the adjacent existing residential properties. Typical HVAC units for residences have sound levels not greater than 67 dBA L_{eq} at 1 meter (Lennox 2017). At 20 feet (the closest residences to the Proposed Project boundary), these levels would be reduced to approximately 51 dBA $L_{eq.}$ Even if the HVAC equipment were to run continuously over a 24-hour period, the resulting noise level at the closest residence would be 57 dBA. Thus, operational noise levels from the proposed residences would be expected to remain below 60 dBA L_{dn} at existing adjacent residences, resulting in a **less-than-significant impact.**

Mobile Sources

The primary noise-related affect the Proposed Project could have in areas off-site is an increase in traffic, which is the main source of noise in most urban areas. Proposed-Project-related traffic noise levels were examined along roadways where the Proposed Project would principally contribute vehicle trips. Trip volume calculations, including traffic volumes along Main Street, Adams Street, Railroad Avenue, Library Lane, Starr Avenue, Hunt Avenue, Paseo Grande Drive and Silverado Trail are included in Appendix I.

Acoustical calculations using standard noise modeling equations adapted from the FHWA noise prediction model were performed for the following traffic scenarios: Existing (conditions), Existing Plus Project, Cumulative, and Cumulative Plus Project.

The modeling calculations take into account the posted vehicle speed, average daily traffic volumes for each scenario, and the estimated vehicle mix (i.e., automobiles, medium and heavy trucks). The model assumed "pavement" propagation conditions, or a hard site surface. Noise levels are indicated at 50 feet from the centerline of the road, consistent with the methodology used for the St. Helena 2019 General Plan Update Draft Environmental Impact Report (St. Helena 2018). Noise levels at greater distances from the roadway centerline would be lower due to attenuation provided by increased distance from the noise source. Generally, noise from heavily traveled roadways would experience a decrease of approximately 3 dB for every doubling of distance from the roadway. The noise model does not take into account the sound-attenuating effect of intervening structures, barriers, vegetation, or topography. Therefore, the noise levels predicted by the model are conservative with respect to potential exterior exposure levels at noise-sensitive uses located along these roadways.

Future increases in traffic noise levels, with and without the Proposed Project, are provided in Table 3.11-8.

Table 3.11-8
Proposed-Project-Related Traffic Noise Levels

Roadway Segment	Existing dBA CNEL	Exist + Project dBA CNEL	Cumulative dBA CNEL	Cumulative + Project dBA CNEL	Maximum Increase (dB)
Main Street North/West of Adams	65.2	65.3	65.6	65.6	0.1
Main Street South/East of Adams	65.0	65.1	65.7	65.8	0.1
Adams Street North of Railroad	63.8	63.8	64.1	64.1	< 0.1
Railroad Avenue Adams to Hunt	64.2	64.4	64.4	64.6	0.2
Library Lane East of Adams	49.1	49.4	49.2	49.5	0.3
Starr Avenue Hunt to Pope	59.7	60.0	61.3	61.5	0.3
Hunt Avenue North of Railroad	59.6	59.8	61.2	61.4	0.2
Paseo Grande Drive East of Hunt	62.3	62.5	63.3	63.4	0.3
Silverado Trail South of Mountain	70.6	70.7	71.5	71.6	0.1

Source: Appendix I.

Proposed-Project-related traffic noise increases along roadways where the Proposed Project would contribute trips would in all cases be less than 1 dBA, as shown in Table 3.11-8. Such increases would therefore be well below the 3 dB perceptible increase threshold. The Proposed Project would also increase the roadway noise level by less than 3 dB in the cumulative scenario. As with project-specific increases, traffic noise levels would increase less than 3 dB CNEL on all roadways, when comparing existing noise levels to those from cumulative plus the Proposed Project. Therefore, the Proposed Project would have a **less-than-significant impact** due to an increase in off-site roadway traffic noise levels.

Mitigation Measures

None required.

3.11.5 Cumulative Impacts

The cumulative context for traffic noise is the traffic volume increases resulting from the Proposed Project along with buildout of the 1993 General Plan, and the anticipated increase in traffic volumes along local roadways. The traffic analysis assumed a cumulative context of

transportation impacts resulting from the Proposed Project along with buildout of the 2019 General Plan.

Non-transportation noise sources (e.g., those associated with Proposed Project operation, which for residential properties include HVAC equipment and landscape maintenance activities) and construction noise impacts are typically project-specific and highly localized (i.e., these do not generally affect the community noise level at distances beyond several hundred feet). These noise sources do not significantly contribute to cumulative noise impacts at distant locations and are not evaluated on a cumulative level.

Construction activities associated with proposed or future development within the area would contribute to cumulative noise levels, but in a geographically limited and temporary manner. As other development occurs in the area, noise from different types of uses (e.g., traffic, aircraft, fixed noise sources) would continue to combine, albeit on a localized basis, to cause increases in overall background noise conditions within the area. As a result, such sources do not significantly contribute to cumulative noise impacts at distant locations and are not evaluated on a cumulative level.

3.11-4: Would the proposed project, in addition to cumulative development in the City, increase noise that exceeds the City's noise standards? The Project's contribution would not be considerable.

The analysis of off-site Proposed-Project-related traffic noise levels included an evaluation of traffic volumes and resulting roadway traffic noise levels from buildout of the City. The evaluation concluded that roadway traffic levels would not reach significant levels when compared against existing roadway traffic noise levels. Therefore, the Proposed Project's contribution to existing cumulative noise would not be considerable resulting in a **less-than-significant cumulative impact.**

Mitigation Measures

None required.

3.11.6 References

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FTA (Federal Transit Administration). 2006. *Transit Noise & Vibration Impact Assessment.* Federal Transit Administration, Office of Planning and Environment. May 2006.

3.12 PUBLIC SERVICES AND RECREATION

3.12.1 Introduction

This section describes the existing public services (fire and police protection, schools, and libraries) and recreational resources in the City of St. Helena (City) and discusses applicable federal, state, and regional regulations pertaining to the provision of public services and recreational facilities to support implementation of the proposed Hunter Subdivision Project (Proposed Project). This section evaluates the potential effects of increased demand for public services and recreational facilities associated with development of the Proposed Project.

Comments received in response to the Notice of Preparation included concerns regarding overcrowding of local schools, heightened demand for police and fire services, impacts to the City's volunteer fire department, increase in costs for City services that could be passed onto local residents, increase in use of parks, and impacts to the maintenance road/pedestrian trail along the north/northwest boundary of the Project site. All of these concerns are addressed in this section. A copy of the Notice of Preparation and comments received is included in Appendix A.

Sources referenced to prepare this section includes information provided in Chapter 2, Project Description and from the individual service providers. Other sources consulted are listed in Section 3.12.6, References.

3.12.2 Environmental Setting

This section describes the existing conditions in the Project area and identifies the public services and recreational resources and facilities that could be affected by the Proposed Project.

Fire Protection

The Project site would receive fire protection services from the St. Helena Fire Department (SHFD). The SHFD provides fire protection services for the City, including fire suppression and prevention, education, emergency medical and rescue services, and response to hazardous materials incidents. The SHFD has one station located at 1480 Main Street, approximately 0.2 miles southwest of the Project site. This station is equipped with three fire engines, one water tender, two brush engines and one combination engine and ladder truck (Capponi pers. comm. 2018, updated by A. Vidler 2021). The SHFD also has a satellite fire station located at 1025 Dowdell Lane, approximately 0.85 miles southwest of the Project site.

The SHFD is served by three full-time staff members and 24 paid-call staff, including two fire chiefs, two fire marshals, one administrative assistant/fire inspector, and two full-time firefighters (Capponi pers. comm. 2018; City of St. Helena 2018a; updated by A. Vidler 2021). All

firefighters are trained to the First Responder level and eight are certified Emergency Medical Technicians (Capponi pers. comm. 2018, updated by A. Vidler 2021). The SHFD is equipped with two Type 1 engines, one Type 3 engine, two Type 6 brush vehicles, one command vehicle, two utility vehicles, one water tender, one Type 1 truck, and one medium-duty complement rescue trailer (City of St. Helena 2018b, updated by A. Vidler 2021).

When a call is received the SHFD is dispatched along with the ambulance company. The SHFD strives to maintain a maximum fire response time of 8 minutes or less from dispatch to time of arrival within the city limits (City of St. Helena 2018b). On receiving a call, the department responds to each call with all available paid-call firefighters. On average, 10 firefighters are dispatched in response to a call. The response time to the Project site under current conditions is approximately 3 minutes during the 70-hour coverage period, which occurs between 7 a.m. to 5 p.m. Monday through Sunday, and 5–6 minutes during all other times (Capponi pers. comm. 2018, 2019; updated by A. Vidler 2021). In 2020, the SHFD responded to 855 calls for service, the majority of which were emergency medical calls (City of St. Helena 2018a, updated by A. Vidler 2021). The department responded to approximately 69% of all calls in less than seven minutes during 2017 (City of St. Helena 2018b).

The SHFD is a member of the Napa County mutual aid automatic aid agreement, which requires all fire departments in the County to respond to a call for service as requested or required. Napa County Station 26, located in the City, and Napa County Station 12, located in the City of Yountville, provide automatic aid to all residential and commercial structure fires in the City (City of St. Helena 2018b).

The SHFD routinely reviews development applications and provides conditions of approval to address requirements for fire sprinklers, emergency access, and other fire-related concerns (City of St. Helena 2018b).

Police Protection

Police services for the Project site would be provided by the St. Helena Police Department (SHPD), located at 1480 Main Street approximately 0.2 miles from the site. The SHPD serves the City with 13 sworn police officers, 5 full-time dispatchers, one community service officer, and six police volunteers. Equipment maintained by the SHPD includes four patrol cars, one K9 unit, one Community Service Officer vehicle, one administrative vehicle, one training vehicle, and one dual purpose motorcycle. The SHPD provides 24-hour security patrol for the entire City, with one sergeant and two officers assigned to each patrol watch for the day and night shifts. The department currently has a police officer to resident ratio of 10 officers per 7,000 residents, or 1 officer to 700 residents. The department’s on-duty average is 2 officers per 7,000 residents, or one officer per 3,500 residents (Hartley pers. comm. 2021). The department strives to maintain a staffing ratio of approximately two sworn police staff for every 1,000 residents (City of

St. Helena 2018b). The SHPD also strives to maintain an average non-emergency call response time of less than 8 minutes and average emergency response time of 5-minutes or less. The SHPD has an average response time goal for all Priority One calls of three minutes or less. The department had an average response time for Priority One calls of 2 minutes and 20 seconds in 2020. The response time to the Project site under current conditions is less than 3 minutes from the SHPD headquarters. However, according to the department, response times may vary depending on the location of the on-duty patrol unit (Hartley pers. comm. 2021).

In addition to calls within the City, the SHPD participates in separate mutual aid agreements with California Highway Patrol, the Calistoga Police Department, and the County of Napa.

Schools

The Project site is located within the St. Helena Unified School District (SHUSD). The SHUSD had an enrollment of approximately 1,192 students from kindergarten through twelfth grade during the 2017-2018 school year (City of St. Helena 2018b). SHUSD operates one primary school, one elementary school, one middle school, and one high school. Students from two nearby elementary districts also attend the district's schools (City of St. Helena 2018c). The total capacity for all schools within the SHUSD is 1,776 (California Department of Education Data Reporting Office 2018).

The SHUSD Facility Master Plan (2010) was reviewed to determine projected SHUSD enrollment. With a general trend in declining enrollment in recent years, the district expects adequate capacity in the near term, and generally into the future (City of St. Helena 2018b). Student capacity in the 2016–2017 school year enrollment, and projected 2017–2018, 2018–2019, and 2019–2020 enrollment for SHUSD schools is shown in Table 3.12-1.

Table 3.12-1
SHUSD Enrollment and Capacity Data

School	Grades Served	Total Capacity	2016-2017 Enrollment	Projected 2017-2018 Enrollment	Projected 2018-2019 Enrollment	Projected 2019-2020 Enrollment
St. Helena Primary School	K-2nd Grade	284	238	250	252	255
St. Helena Elementary School	3rd-5th Grade	379	230	239	242	238
Robert Louis Stevenson Middle School	6th-8th Grade	387	261	278	265	264
St. Helena High School	9th-12th Grade	726	469	438	441	439
	Total	1,776	1,199	1,205	1,200	1,196

Source: California Department of Education Data Reporting Office 2018, SHUSD 2010.

Libraries

The City operates one public library, the George and Elsie Wood Public Library, located approximately 0.1 miles northwest of the Project site at 1492 Library Lane. The library currently contains over 75,000 books, DVDs, books on CD, CDs, newspapers, magazines, microfilm and other media (City of St. Helena 2018d). The library also includes the Napa Valley Wine Library, which encompasses approximately 3,500 titles and over 6,000 items. Furthermore, the Robert Louis Stevenson Museum is also located within the library (City of St. Helena 2018d).

The City's library has 6 full-time employees staffing the library 6 days a week, and 7 part-time employees. The library opens at 10:00 a.m. on Monday through Thursday and closes at 6:00 p.m. on Monday, 7:00 p.m. on Tuesday and Wednesday, and 9:00 p.m. on Thursday. The library is open from 2:00 p.m. until 6:00 p.m. on Friday and Saturday and is closed on Sunday. The library currently serves approximately 42 people per hour on average. No formal plans have been made for development of new library facilities (Kreiden, pers. comm. 2018).

Recreation

The City's Parks and Recreation Department oversees the development and operation of parks and recreational facilities within the City. There are eleven active parks and four trails within the City limits, which include a variety of recreational facilities, including tennis courts, softball fields, bocce courts, playgrounds, fitness courses, and picnic facilities. In addition, the Parks and Recreation Department provides a variety of recreational programs, including youth and adult sports programs, community classes and events, youth and teen programs, after-school and educational programs, summer camps, and special events. Maintenance of City recreational facilities is provided by the Parks Division of the Public Works Department (City of St. Helena 1993, 2018e). Table 3.12-2, below, lists the City's active parks, park acreage, and amenities/facilities available in each park.

Table 3.12-2
City of St. Helena Recreational Facilities

Recreational Facility	Type	Acreage	Amenities
Baldwin Park (1591 Spring St.)	Mini	0.76	Grassy Area, Pathway, Picnic Tables
Crane Park (360 Crane Avenue)	Community	11.27	Baseball field, Bocce Ball Courts (lighted), Horseshoe Pits, Picnic Area, Picnic Tables, Playground Equipment, Restrooms, Tennis Courts (lighted), Volleyball Court (lighted)
Jacob Meily Park (Pope St.)	Neighborhood	5.42	Parking, Paved Walking Trail, Picnic Area, Picnic Tables, Restrooms, Grass Area
Lewis Station (1100 Church St.)	Mini	0.13	Picnic Tables, Restrooms

Table 3.12-2
City of St. Helena Recreational Facilities

Recreational Facility	Type	Acreage	Amenities
Lyman Park (1498 Main Street)	Mini	0.89	Grass Area, Historic Gazebo, Playground Equipment
Mary Fryer Park (1300 Mitchell Dr.)	Mini	0.84	Picnic Tables, Playground Equipment
Mennen Park (1600 Voorhees Circle)	Mini	0.17	Grass Area, Pathway
St. Helena Skate Park (360 Crane Avenue)	Mini	0.41	Skate Park
Stephen C. McCullagh Park (1758 Crinella Drive)	Mini	0.14	Sandbox, Climbing Rock and Rope Structures, Benches, Play Area
Stone Bridge Park (Pope St.)	Mini	0.75	Grass Area
Wappo Park (201 Pope St.)	Neighborhood	6.65	Dog Park, Pathway, Picnic Tables
	Total	27.43	

Source: City of St. Helena 2018b.

The closest parks to the Project site include Lyman Park, Jacob Meily Park, and Lewis Station, all located approximately 0.3 miles from the site. Lyman Park is an approximately 0.9-acre park that contains a picnic area, turf areas, a children's play area and a historic gazebo (City of St. Helena 2018f).

- Jacob Meily Park is an approximately five-acre neighborhood park that includes a turf area, picnic tables, a playground, and a paved walking trail along Sulphur Creek (City of St. Helena 2018g).
- Lewis Station is a pocket-park, measuring 0.13 acres, which contains two picnic tables and benches (City of St. Helena 2018h).
- Stone Bridge Park and Wappo Park are both located approximately 0.4 miles south of the Project site. Stone Bridge Park consists of approximately 0.75 acres of turf/grass and benches, and Wappo Park is a newly constructed neighborhood park that contains passive recreation facilities such as a loop trail, two picnic areas, and a dog park (City of St. Helena 2018i,j).

Additionally, an approximately 0.6 miles pedestrian path/trail is located parallel to the gravel maintenance road located adjacent to the northern boundary of the Project site. The maintenance road is not a City recreation trail but is used informally as a trail by local residents. An open space parcel owned by the City is located adjacent to the project site to the north/east.

3.12.3 Regulatory Setting

Federal Regulations

There are no federal regulations regarding the provision of local services or recreational facilities.

State Regulations

The following state regulations pertaining to public services and recreational facilities would apply to the Proposed Project. There are no state regulations pertaining to law enforcement services.

Fire Protection

Uniform Fire Code

The Uniform Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The code contains specialized technical regulations related to fire and life safety.

Building, Fire and Residential Code

The State Fire Marshal's Building, Fire and Residential Code went into effect on January 1, 2011. The 2010 California Building Standards Code includes the requirement that all new one- and two-family dwellings and townhouses include residential fire sprinklers for all residences constructed after January 1, 2011. Fire sprinkler systems are also required in office buildings and multi-family dwellings (i.e. apartments).

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, include regulations for building standards (as also set forth in the California Building Code), and fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Equipment, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical

services. The standards include guidelines on the handling of highly combustible materials, fire hosing sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) offers fire protection services for State Responsibility Areas and local jurisdictions with contracts with CAL FIRE. State Responsibility Areas are located along the western and eastern boundaries of the City within the unincorporated area of Napa County (CALFIRE 2007). CAL FIRE also aids local fire departments by providing wildfire abatement services for their jurisdictions through mutual and automatic aid agreements. CAL FIRE also endorses state-legislated fire safety standards, supports fuel management efforts, and implements fire-safety inspections to further its objectives. CAL FIRE is responsible by law for responding to uncontrolled fire that has the capability for destruction of life, property, or natural resources.

Parks and Recreation

Quimby Act

California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density, parkland cost, and other factors. Land dedication and fees collected pursuant to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities or the development of public schools.

Schools

California Education Code

The California Code of Regulations (CCR), Title 5, Education Code governs all aspects of education within the state. The California Education Code authorizes the California Department of Education to develop site selection standards for school districts which require districts to select a site that conforms to certain net acreage requirements established in the California Department of Education's 2000 School Site Analysis and Development guidebook. The guide includes the assumption that the land purchased for school sites will be in a ratio of approximately 2:1 between the developed grounds and the building area. If the "availability of land is scarce and real estate prices are exorbitant," the site size may be reduced. California Department of Education policy states that if a school site is less than the recommended acreage required, the district shall

demonstrate how the students will be provided an adequate educational program, including physical education, as described in the district's adopted course of study.

Senate Bill 50

Senate Bill (SB) 50 (Chapter 407, Statutes of 1998), known as the Leroy F. Greene School Facilities Act of 1998, created the School Facility Program where eligible school districts may obtain state bond funds. The new state program was funded with bond revenue from Proposition 1A, a $9.2 billion state bond initiative approved by voters in November of 1998. State funding requires matching local funds that generally come from developer fees. The passage of SB 50 eliminated the ability of cities and counties to require full mitigation of school impacts and replaced it with the ability for school districts to assess fees directly to offset the costs associated with increasing school capacity as a result of new development. SB 50 amended Government Code Section 5699(a) to state that payment of SB 50 fees would be the exclusive method of considering and mitigating impacts on school facilities that may result from a project.

Local Regulations

The following local/regional regulations pertaining to public services and recreation would apply to the Proposed Project.

City of St. Helena 1993 General Plan

The Public Health and Safety Element, Public Facilities and Services Element, and Parks and Recreation Element of the City of St. Helena 1993 General Plan provide guiding and implementing policies regarding public services and recreation facilities, including the following. The General Plan does not contain any policies that address law enforcement.

Public Health and Safety Element - Implementing Policies

Policy 8.5.6: Require all new development to meet the minimum fire flow rates specified by the City's Fire Code.

Policy 8.5.7: Ensure that all streets and roads are adequate in terms of width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide alternative emergency ingress and egress.

Public Facilities and Services Element – Guiding Policies

Policy 9.6.3: Support and cooperate with the St. Helena Unified School District in its efforts to ensure adequate financing for new school facilities. To this end, the City shall cooperate with the School District in the collection of school facility development fees

from new residential and non-residential development, and will work with the District to identify, establish, and implement additional measures that may be necessary to adequately finance school facilities in the city.

Parks and Recreation Element – Guiding and Implementing Policies

Policy 10.3.5: Encourage developers to provide open space and recreational facilities as part of new residential developments. The City may consider density bonuses for the inclusion of significant public recreational facilities in new development.

Policy 10.3.6: Assess park development fees on all new commercial, industrial, and residential development sufficient to fund City-wide park improvements.

Implementing Policy 10.3.9: Adopt 5 acres of developed parkland per 1,000 residents as the goal for citywide park acquisition and development.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The Public Health and Safety Element, Public Facilities and Services Element, and Parks and Recreation Element of the City of St. Helena 2019 General Plan provide the following policies regarding public services and recreation facilities, including the following:

Public Health and Safety Element

Policy PS4.6: Ensure that all streets and roads are adequate in terms of width, turning radius, and grade in order to facilitate access by City firefighting apparatus, and to provide alternative emergency routes of ingress and egress.

Policy PS4.D: Require all new development to meet the minimum fire flow rates specified by the City's Fire Code.

Public Facilities and Services Element

Policy PF5.4: Require that the approval of residential, commercial, or industrial development be contingent upon the mitigation of the impact of such development on the St. Helena Unified School District's ability to serve school-age children.

Policy PF5.7: Set a goal of a maximum fire department response time of 8 minutes within the St. Helena city limits.

Policy PF5.8: Set a staffing ratio of 2 police officers per 1,000 population and for priority one calls, an average police department response time of 3 minutes or less.

Parks and Recreation Element

Policy PR1.1: Retain the park standard from the 1993 General Plan of 5.0 acres of parkland per 1,000 residents, while striving for the nationally recommended standard of 10.5 acres per 1,000 residents.

Policy PR1.4: Require park land dedications or civic improvement fees on all new residential, commercial, and industrial developments to meet the standard of 5.0 acres of parks per 1,000 residents.

St. Helena Municipal Code

Chapter 3.32, Development Impact Fees, of the City's Municipal Code, specifies that, in order for the City to implement the goals and objectives of the City's General Plan and to mitigate impacts from new development within the City, the City requires development impact fees to finance public improvement projects related to civic improvement projects, public safety, sewer projects, water projects, traffic mitigation, parks and storm drainage. Development fees for public safety, civic improvement projects, and parks are provided below.

Public Safety Impact Fee

Chapter 3.32, Section 3.32.050 addresses public safety impact fees. Public safety impact fees are used to fund the acquisition, construction, and reconstruction of facilities and equipment and other capital purposes needed for the City's fire and police departments. The impact fee is one dollar four cents ($1.04) per square foot for all new development projects.

Civic Improvement Fee

Civic improvement fees (Section 3.32.060) are used to fund the acquisition, construction, and reconstruction of City hall, the St. Helena library, community facilities, and equipment and other capital purposes needed for civic services. The impact fee is one dollar ninety-five cents ($1.95) per square foot for all new residential development projects.

Park and Recreation Impact Fee

Park and recreational impact fees (Section 3.32.065) are used to fund the acquisition, construction, and reconstruction of playgrounds, community facilities, recreation facilities and equipment and other capital purposes needed for park and recreation services. The impact fee is twelve dollars eighteen cents ($12.18) per square foot for all new medium and higher density (multi-family) residential development.

Fire Protection Systems

Chapter 15.36 Section 15.36.060 of the City's Municipal Code adopts the requirements of the California Fire Code, with amendments. Requirements for fire protection systems for new development within the city is included. The Ordinance requires that approved automatic sprinkler systems be installed in new buildings and structures, including accessory buildings intended for use as a dwelling unit. Furthermore, the Ordinance gives the Fire Code Official authority to require construction documents and calculations for all fire protection systems and to require permits be issued for the installation, rehabilitation or modification of any fire protection system. Construction documents for fire protection systems shall be submitted for review and approval prior to the issuance of a building permit.

3.12.4 Impacts

Methods of Analysis

The impact analysis evaluates the ability of the SHPD, SHFD, SHUSD, St. Helena Parks and Recreation Department, and the George and Elsie Wood Public Library to serve the Proposed Project through a qualitative review of Proposed Project characteristics, such as location, size, and current demand. The analysis also addresses whether the Proposed Project would require the need to add more staff or construct additional facilities to accommodate an increase in demand.

In order to assess whether the Proposed Project would have impacts related to the provision of public services and recreational facilities, the analysis below incorporates estimates for population growth generated by the Project. In order to determine demand for public services and recreation facilities, the number of proposed residential units was multiplied by the current demand factors contained in the City's Development Impact Fee Study Report (City of St. Helena 2013).

The Proposed Project would construct 51 single-family residences, 25 attached residential units, and 11 accessory dwelling units (ADU) within the 16.9-acre Project site.

The City uses a persons per household factor of 2.45 people per unit for medium/higher density residential land uses for purposes of calculating public safety, civic improvement, and park and recreation facilities demands (City of St. Helena 2013). Using this factor, the Proposed Project would conservatively generate 213 residents, including the ADUs. It is unlikely the 11 ADU's would accommodate more than one or two people; therefore, the population estimate of 213 is a conservative assumption for the purposes of evaluating Project impacts.

Table 3.12-3 considers the increase in demand for primary, elementary, middle and high schools generated by the Proposed Project. Student generation rates were derived from the

SHUSD Facility Master Plan, which outlines expected growth in demand for school facilities associated with projected development and plans how to fund and respond to such growth.

Table 3.12-3
Projected Proposed Project Student Generation

Grades	Residential Units	Student Generation Rate (per total number of units)	Students Generated
K-2	87	0.058	5
3-5	87	0.080	7
6-8	87	0.088	8
9-12	87	0.088	8
		Total	28

Note: For a conservative assumption a total of 87 residential units (including the 11 ADUs) is assumed. The likelihood of all 11 ADUs including school-age children is very low.
Source: SHUSD 2010.

Thresholds of Significance

Consistent with Appendix G of the California Environmental Quality Act Guidelines, a significant impact would occur if the Proposed Project would do any of the following:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
  - Fire protection.
  - Police protection.
  - Schools.
  - Other public facilities.
- Increase the use of existing neighborhood parks or other recreational services such that a substantial physical deterioration of the facility would occur or require the construction or expansion of facilities that could have a physical adverse effect on the environment.

While important to the quality of life in the Project area, impacts to schools from increased development do not necessarily result in physical environmental impacts. In *Goleta Union School District v. Regents of the University of California* (2d Dist. 1995) (37 Cal. App. 4th 1025, 1032, 1995), the Court of Appeal found that "[c]lassroom overcrowding, per se, does not constitute a significant effect on the environment." A General Plan may have policies relating to

public service levels in general or schools in particular. If a development project overwhelms the school district's capacity and quality of service, it could be inconsistent with the General Plan. Neither the City of St. Helena 1993 General Plan nor the 2019 General Plan have a specific policy related to school service levels. The Proposed Project applicant would pay the required school impact fees to the SHUSD.

Impacts and Mitigation Measures

3.12-1: Would the Proposed Project increase demand for public services requiring the need to construct new facilities, or expand existing facilities, the construction of which could cause significant environmental impacts? This impact would be less than significant.

Fire Protection

The Project site is currently undeveloped and requires minimal service from the SHFD. Development of the site with residential uses would result in increased demand for City fire protection services and facilities. Development of the site with residential uses is consistent with existing surrounding development that includes residential and office uses located to the south and southeast of the Project site and is consistent with the underlying land use designation and zoning. The Project site would be served by the City's fire department located at 1480 Main Street, approximately 0.2 miles from the Project site. As described above, the Proposed Project is expected to increase the City's population by approximately 213 residents. This population increase is within the projected population for proposed growth in the City's 1993 General Plan which assumed a residential density of up to 12.0 dwelling units per acre,[1] which would allow a maximum of 203 dwelling units and up to 497 residents, was assumed. Nevertheless, the Proposed Project would increase demand for fire protection services.

By increasing the population, development of the Project site would increase the demand for fire protection and emergency services, including additional staffing and vehicles, but would not necessitate the construction of a new facility or expansion of an existing facility. The SHFD measures adequate service by response time and not by the number or ratio of firefighters per population.

Fire protection services are funded through various City tax revenues. Development of the Proposed Project would generate revenue to finance the expansion of additional operational services. Furthermore, the Proposed Project applicant would pay required impact fees pursuant to the City's Public Safety Impact Fee, which funds the acquisition, construction, and

[1] The MR zoning permits a maximum density of 16.0 dwelling units per acre. This would permit a maximum of 270 residential units and 661 residents.

reconstruction of facilities and equipment and other capital purposes needed for the City's fire department. These fees are based on a proportionate share of the cost of new development for facilities and equipment serving the City. Therefore, because the City's existing facilities and equipment are planned to serve future development, public safety impact fees are largely intended to recoup a project's proportionate share of the depreciated replacement cost of existing facilities and equipment.

The Proposed Project would comply with Chapter 15.36 of the City's Municipal Code and the 2010 State Building Code, which requires installation of approved automatic sprinkler systems in all single-family and multi-family buildings. Furthermore, the Proposed Project would be consistent with 1993 General Plan Policy 8.5.6 and 2019 General Plan Policy PS4.D, which require new development to meet the minimum fire flow rates specified by the City's Fire Code, and 1993 General Plan Policy 8.5.7 and 2019 General Plan Policy PS4.6, which require all streets and roads to be adequate in terms of width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide alternative emergency ingress and egress. The site plan would be subject to plan review by the SHFD to ensure proper access for fire and emergency response is provided and required fire suppression features are included. The Proposed Project includes two access points as well as a separate Emergency Vehicle Access.

The increased demand for fire protection services associated with the Proposed Project would be offset by payment of required taxes and fees that would help fund ongoing service and new facilities; therefore, the Proposed Project would have a **less-than-significant impact** on the provision of fire protection services and would not require the construction of new, or expansion of existing fire facilities.

Police Protection

The Project site is undeveloped and requires minimal law enforcement services from the SHPD at present. Police services for the Project site would be provided from the SHPD's station located at 1480 Main Street, approximately 0.2 miles from the site. The 1993 General Plan does not include any policies that address law enforcement, but the 2019 General Plan does include Policy PF5.8 to set a staffing ratio of 2 police officers per 1,000 residents and to have an average police department response time of 3 minutes or less for priority one calls. The SHPD currently has a police officer to resident ratio of approximately 2.0 sworn officers per 3,500 residents. The Proposed Project would increase demand for law enforcement services by conservatively adding approximately 213 residents to the City's population, requiring one officer. The addition of one officer would not require the construction of new, or the expansion of existing, police facilities because adequate space is available in the SHPD Facility. This would be consistent with the staffing ratio required by Policy PF5.8 and would also improve police department response times due to the larger officer-to-resident ratio.

The City's law enforcement operational services are funded through various City tax revenues. Development of the Proposed Project would generate property tax and sales tax revenue to finance hiring new officers and the expansion of additional services when needed. In addition, the Proposed Project applicant would pay required impact fees pursuant to the City's Public Safety Impact Fee, which funds the acquisition, construction, and reconstruction of facilities and equipment and other capital purposes needed for the City's police department. The increased demand for police protection services associated with the Proposed Project would be offset by payment of required taxes and fees that would help fund ongoing service and new facilities; therefore, the Proposed Project would have a **less-than-significant impact** on the provision of police protection services and would not require the construction of new, or expansion of existing police facilities.

Schools

The SHUSD Facility Master Plan, adopted in July 2010, identifies future plans for new school facilities in the district in order to plan for the anticipated increase in demand for school facilities expected from 2010 through 2020. The projections for future enrollment and student generation are based on historical school enrollment data and trends of enrollment per grade level, district specific birth data, student migration, and land use trends and policies governing residential development (SHUSD 2010). The predicted enrollment is then compared with existing school capacities to determine the need for additional school facilities.

As shown in Table 3.12-3, the Proposed Project would conservatively generate a total of 28 students, based on the assumption that 87 (this includes 11 ADUs) residential units would be constructed and that historical enrollment trends remain relevant. Of these students, five elementary school students would attend St. Helena Primary School (K–2), seven students would attend St. Helena Elementary School (3–5), eight students would attend Robert Louis Stevenson Middle School (6–8), and eight students would attend St. Helena High School (9–12). This is a conservative estimate because it is unlikely that all 11 ADUs would include families with school-age children. As shown in Table 3.12-1, St. Helena Primary School has an estimated remaining capacity of 29 students, St. Helena Elementary School has an estimated remaining capacity of 141 students, Robert Louis Stevenson Middle School has an estimated remaining capacity of 123 students, and St. Helena High School has an estimated remaining capacity of 287 students, when accounting for the projected 2019–2020 enrollment. Therefore, the addition of school-age students generated by the Proposed Project would not exceed the capacity of schools within the SHUSD, and existing schools are estimated to have more than sufficient capacity for projected enrollment through 2025. Under SB 50, payment of required school impact fees is deemed complete and full mitigation for impacts to school facilities. The impact would be considered **less than significant**.

Other Public Facilities

As discussed previously, the Proposed Project would conservatively add 213 residents to the City's population. This would increase demand for existing public facilities within the City, including the George and Elsie Wood Public Library and City Hall. Payment of the City's civic improvement fee, as required by the City's Municipal Code Chapter 3.32, would ensure that the Proposed Project would offset impacts related to other public facilities, including the library, community facilities, and equipment and other capital purposes needed for civic services. These impact fees were calculated to ensure new development would pay their proportionate share of the cost of existing and future capital assets required to serve the City. This would ensure that the Proposed Project would have a **less-than-significant impact** on other public facilities.

Mitigation Measures

None required.

3.12-2: Would the Proposed Project increase the use of existing neighborhood parks or other recreational services such that a substantial physical deterioration of the facility would occur, or require the construction or expansion of facilities that could have a physical adverse effect on the environment? This impact would be less than significant.

The Proposed Project proposes to construct 87 residential units (including 11 ADUs). Using the average persons per household of 2.45, as stated in the City's Development Impact Fee Study Report (City of St. Helena 2013), the Proposed Project would conservatively generate 213 residents. As described in Section 3.12.3, the City's General Plan requires 5 acres of developed parkland per 1,000 residents. This standard ensures that recreational services are provided equally to all residents and that the quality of existing facilities can be maintained. The Proposed Project does not provide any on-site parks or recreational facilities. The City currently contains 27.43 acres of total parkland and has a population of 6,196 (City of St. Helena 2018d, U.S. Census Bureau 2018). On the basis of the 2018 population of 6,196 residents and park acreage of 27.43, the City's parkland to resident ratio is 4.43 acres per 1,000 residents. Assuming the addition of 213 new residents to the City, the City would have a ratio of 4.28 acres of parkland per 1,000 residents. This falls short of the City's parkland goal of 5 acres of parkland per 1,000 residents, which included as Implementing Policy 10.3.9 in the 1993 General Plan and Policy PR1.1 in the 2019 General Plan. Policy PR1.1 also states a goal to reach the nationally recommended standard of 10.5 acres of parkland per 1,000 residents, although this is not a requirement.

Parks within the vicinity of the Proposed Project include Lyman Park, Jacob Meily Park, and Lewis Station, which are all located approximately 0.3 miles from the Project site. These parks have adequate facilities, including picnic and turf areas, children's playgrounds, and a walking

trail, to support Proposed Project residents. The maintenance road adjacent to the northern boundary of the Project site is not a part of the Proposed Project, nor is it a City trail. There is an existing City trail located in the northside of the maintenance road. A small portion of the maintenance road would be paved to accommodate construction of the Adams Street extension, but sidewalks would be provided along the extension of Adams Street to provide a safe connection to the remainder of the maintenance road and the pedestrian trail, which would remain unaltered by the Proposed Project.

Park and recreational impact fees are imposed upon all residential development within the City. These impact fees are used to cover the cost of land acquisition and park improvements and are based on added population per unit, then converted into a cost per square foot for each type of residential development. The Proposed Project applicant would pay the required park fees to be used by the City to purchase land to construct new parks or upgrade existing recreation facilities. This would ensure that increased use of existing neighborhood parks due to the Proposed Project residents would not cause substantial physical deterioration and would account for construction and expansion of facilities to accommodate the increase in population associated with the Proposed Project.

Payment of the City's park and recreational impact fees as stipulated in the City's Municipal Code Chapter 3.32, consistent with the Quimby Act, would ensure that the Proposed Project would have a **less-than-significant impact** related to recreational facilities.

Mitigation Measures

None required.

3.12.5 Cumulative Impacts

This cumulative impact analysis does not rely on any list of specific pending, reasonably foreseeable development proposals in the general vicinity of the Proposed Project. The cumulative context includes projected buildout under the City's 1993 General Plan and other approved projects in the City. While the Proposed Project is required to be evaluated under the 1993 General Plan, any changes relative to the 2019 General Plan are also evaluated for informational purposes.

The geographic scope for the cumulative analysis for the provision of fire and police protection services, parks and recreation and other public services is the City limits which corresponds to the various provider district boundaries. The geographic scope for schools would be the SHUSD district boundary.

3.12-3: Would the Proposed Project contribute to a cumulative increase in demand for public services, schools, and recreation facilities? The Project's contribution would not be considerable.

Development of the Proposed Project would contribute to a cumulative increase in demand for public services and parks and recreational facilities. New fire and police personnel and facilities as well new schools and parks and recreation facilities may be required for 1993 General Plan buildout conditions. This could result in the need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives. However, future development within the City would be required to comply with policies set forth in the City's 1993 General Plan and pay applicable development impact fees as specified in Chapter 3.32, Development Impact Fees, of the City's Municipal Code.

The City recently updated its General Plan in 2019, and the Draft Environmental Impact Report prepared for the 2019 General Plan notes that the SHFD and the SHPD does not anticipate the need to increase staffing levels or construct any new facilities in order to provide service for future population growth. The projected addition of residents and employees by 2040 (including development of the Project site) would likely increase the demand for emergency fire and police response and preventive services; however, the increase is modest and not expected to create a need for new or expanded fire or police protection facilities and impacts were determined to be less than significant. Therefore, the Proposed Project's contribution would not be considerable.

The 2019 General Plan notes that the projected addition of residents and employees by 2040 (including development of the Project site) would likely increase the need for more parks and recreation facilities; however, the impact was determined to be less than significant. As discussed above, the Proposed Project would comply with all applicable City goals and policies and pay applicable fees. The Proposed Project's incremental contribution to the cumulative increase in demand is considered less than significant. Thus, the Proposed Project would not have a considerable contribution to a significant cumulative impact and the Proposed Project's contribution is less than significant resulting in a **less-than-significant cumulative impact**.

Mitigation Measures

None required.

3.12.6 References

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3.13 UTILITIES AND SERVICE SYSTEMS

3.13.1 Introduction

This section describes the utilities and service systems that would serve the proposed Hunter Subdivision Project (Proposed Project), specifically water supply, wastewater conveyance and treatment, storm drainage infrastructure, and solid waste disposal and identifies feasible mitigation measures to address impacts.

Comments received in response to the Notice of Preparation included concerns regarding increased water consumption, stormwater drainage capacity, existing sewer infrastructure, water conservation measures, cumulative impacts to water resources, and impacts of on-site groundwater pumping to City of St. Helena (City) groundwater supply wells. Please see Section 3.9, Hydrology and Water Quality for more information pertaining to capacity of the City's stormwater infrastructure and water quality impacts associated with stormwater discharge. The remaining issues are addressed in this section. A copy of the Notice of Preparation and comments received is included in Appendix A.

This section incorporates information from the following sources: Preliminary Water Calculations Technical Memorandum, included in Appendix J; City of St. Helena Storm Drainage Master Plan (City of St. Helena 2000); City of St. Helena Sewer System Management Plan (City of St. Helena 2014); and City of St. Helena Water Supply Plan (City of St. Helena 2010). Other documentation used in this analysis includes the City of St. Helena 1993 General Plan, City of St. Helena 2019 General Plan[1], and the City of St. Helena 2019 General Plan Draft Environmental Impact Report (EIR). Other sources consulted are listed in Section 3.13.6, References.

3.13.2 Environmental Setting

This section describes the existing conditions in the Project area and also identifies the public utilities and services that could be affected by future development of the Project site with residential uses.

Existing Site

The Project site is predominantly undeveloped, with the exception of approximately 40% of the site, which is under cultivation with a vineyard. There is an existing agricultural well in the southeastern end of the Project site (proposed to be located in Parcel B of the subdivision) that has been used historically to supply irrigation water to the site but is currently inoperable. This well is proposed to remain in a production capacity to supply irrigation water to meet the outdoor

[1] The 2019 General Plan is also known as the "General Plan Update 2040," but is referred to here by its adoption date.

landscaping demands of the Proposed Project, reducing the water demands on the existing City water supplies and delivery system.

The Project site gradually slopes to the east, with existing elevations ranging from approximately 243 feet above mean sea level in the western portion of the site, to approximately 214 feet above mean sea level in the eastern portion of the site. An existing 10-foot-wide public water line easement containing an active 12-inch water line bisects the north/northeast portion of the site. The easement is proposed to be abandoned as part of the Project and the water line relocated. The Project site is currently undeveloped and not served by City utilities.

Water

This section describes the existing and past water supplies and water demands within the City of St. Helena. Projected water demand for the City is also discussed. The baseline to establish the "existing conditions" is based on when the Notice of Preparation was released for the Project, which was in March 2018 (CEQA Guidelines Section 15125(a)). The existing conditions constitute the "baseline condition" against which project-related impacts are compared. Since 2018, the City's water supply conditions have changed due to a variety of factors; therefore, updated information regarding water supply and availability of water to serve the City is also provided.

City of St. Helena Water Supply

The Project site is located within the City's water service area and is requesting to receive potable water service from the City to meet the Proposed Project's estimated potable water demands associated with development of residential uses. The Project site is currently undeveloped with the exception of a small vineyard in the "panhandle" portion of the site with a larger vineyard located in the southwestern portion of the site. It is assumed these vineyards have previously been irrigated by the on-site well, which constitutes the only water use on site at present. However, since the well is currently inoperable it is not clear if the vineyard is receiving irrigation.

The City receives potable water from three sources: Bell Canyon Reservoir, the Stonebridge Well Complex, and contract water from the City of Napa. Additionally, the City uses the City-owned Lower Reservoir and a groundwater well located near the Napa River as sources of non-potable water (City of St. Helena 2018). Recycled water is not currently a source of water supply in the City. The following details each of the anticipated sources of water for the Proposed Project. Table 3.13-1 provides the contribution of groundwater and surface water to the City's historical water supplies and has been updated through 2020.

Table 3.13-1
City of St. Helena Potable Water Deliveries by Source

Year	Bell Canyon Reservoir	City of Napa Contract	Stonebridge Wells	Total
Supply (acre-feet)				
2013	927	555	400	1,882
2014	865	607	374	1,847
2015	739	523	308	1,570
2016	643	581	241	1,465
2017	736	588	270	1,594
2018	840	623	327	1,790
2019	836	612	240	1,688
2020	702	625	302	1,629
			Average	1,637

Source: City of St. Helena, 2021.

Bell Canyon Reservoir

The City holds water rights permits issued by the State Water Resources Control Board (SWRCB) for storage and diversion of water at the Bell Canyon Reservoir. These rights are detailed in permits 9157 and 14810 issued in 1952 and 1965 respectively (City of St. Helena 2010). As detailed in the City's 2019 General Plan EIR, the City has requested that the SWRCB allow the permits to become a licensed water right (City of St. Helena 2018). These water rights permits have not yet been converted to licenses.

Bell Creek, as impounded in Bell Canyon Reservoir, has served as the City's major water supply source for over 50 years. Bell Canyon Reservoir encompasses approximately 3,647 acres and has a storage capacity of 2,400 acre-feet. Average historical yield from the reservoir is approximately 1,800 acre-feet per year, and sustainable yield ranges from approximately 500 acre-feet in critically dry years to approximately 1,100 acre-feet in wet years (City of St. Helena 2018).

In total, the City is authorized to divert and store 3,800 acre-feet from Bell Canyon Reservoir each year, and directly divert 1 cubic foot per second between November 15 and April 15 (150 days) of each year. Of the City's total authorized amount, 2,000 acre-feet can only be diverted and stored between November 15 and April 15 of each year (City of St. Helena 2010). Table 3.13-2 provides quarterly storage data for the Bell Canyon Reservoir for 2018 through March 2020.

Table 3.13-2
Bell Canyon Reservoir Storage

Date[1]	Storage (acre-feet)
March 2020	1,670.888
January 2020	1,716.734
September 2019	1,708.644

Table 3.13-2
Bell Canyon Reservoir Storage

Date[1]	Storage (acre-feet)
June 2019	2,155.966
March 2019	2,383.69
January 2019	1,514.139
December 2018	1,453.859
September 2018	1,708.644
June 2018	2,155.966
March 2018	1,388.627
January 2018	1,328.850

Sources: City of St. Helena 2018, 2019a, 2019b, and 2020.
Note:
1 Data as recorded on the 1st of each month.

In recent years, the annual yield from Bell Canyon Reservoir has declined significantly due to required water releases into the Napa River to support fish habitat and also from drought conditions. Because of this, water from the City of Napa has become an increasingly large portion of the total water supply (City of St. Helena 2018).

City of Napa Contract

The City of Napa's surface water supplies are obtained from three water sources: State Water Project (SWP) water delivered via the North Bay Aqueduct, Lake Hennessey, and Lake Milliken. On November 8, 2011, the City approved a revised agreement with the City of Napa detailing the availability of treated water supplies from the City of Napa. Under the modified agreement, the City will receive a guaranteed delivery of 600 acre-feet annually from the City of Napa and deliveries are no longer subject to conditions of the City of Napa's water supplies, like the shortage provision that is tied to shortages imposed by the State Water Project on Napa County's state contract – even in drought conditions (City of St. Helena 2011). The City is obligated to pay for 600 acre-feet whether or not the City actually uses the 600 acre-feet. Additionally, the City may request up to 200 acre-feet of additional water supply and the City of Napa will deliver the requested quantity of water if it possesses enough water supply to fulfill the request. The City of Napa has the right to supply this additional water from its own existing supplies or to transport the water on behalf of the City for water purchased by the City from another supplier (City of St. Helena 2011). The initial term of this contract expires on December 31, 2035. As shown in Table 3.13-3, the City of Napa's water supply is expected to be about 31,778 acre-feet during normal years, 17,468 acre-feet during multiple-dry year periods, and about 10,267 acre-feet during single-dry years, according to the 2015 Urban Water Management Plan which is currently being updated (City of Napa 2017). As of 2021 due to the drought conditions water supplies from the City of Napa have been reduced (pers. comm. Wanger 2021).

Table 3.13-3
City of Napa Water Supply

Source	Normal-Year	Multiple-Dry Years	Single-Dry Year
Supply (acre-feet)			
Lake Hennessey	17,500	10,417	5,000
Milliken Reservoir	700	700	400
State Water Project	13,578	6,351	4,867
Total	31,778	17,468	10,267

Source: City of Napa 2017.

Lake Hennessey and Milliken Reservoir are two surface water reservoirs located along tributaries of the Napa River. SWP water is supplied through the North Bay Aqueduct as per an agreement with the Napa County Flood Control and Water Conservation District (NCFCWCD), the SWP contract administrator for several municipalities in Napa County. The City of Napa's three existing water sources and the normal (average) year quantities available through 2035 are discussed below.

Lake Hennessey

Lake Hennessey, a reservoir located 13 miles north of the City of Napa with an approximate storage capacity of 31,000 acre-feet, is the primary local water source for the City of Napa system. The City of Napa obtains water rights to divert and store up to 30,500 acre-feet per year through a permit with the SWRCB Division of Water Rights. Lake Hennessey has an annual average inflow of 19,962 acre-feet, which is much lower than its storage capacity (City of Napa 2017). Water from Lake Hennessy is treated at the Hennessey Water Treatment Plant in Napa County. Table 3.13-4, below, provides information about Lake Hennessey's tributary watershed area, average annual inflow, total storage capacity, normal-year yield, multiple-dry years yield, and critical single-dry year yield. In addition, current storage volume as of June 2021 is also provided.

Table 3.13-4
Lake Hennessey Statistics

Tributary Watershed Area	35,000 acres
Average Annual Inflow	19,692 acre-feet (AF)
Total Storage Capacity (Maximum Yield)	31,000 AF
Normal-Year Yield	17,500 AF
Multiple-Dry Years Yield	10,417 AF
Single-Dry Year Yield	5,000 AF
Current (6/23/21) Storage Volume	19,776 AF

Source: City of Napa 2017 and City of Napa 2021.

Milliken Reservoir

Milliken Reservoir, located approximately five miles northeast of the City of Napa, serves as a seasonal water supply source during the summer months. The City of Napa has a license with the SWRCB that authorizes it to divert and store up to 2,350 acre-feet of water per year for beneficial use. The reservoir has an approximate storage capacity of 1,390 acre-feet and an annual average inflow of 3,656 acre-feet (City of Napa 2017). Water from Milliken Reservoir is treated at the Milliken Water Treatment Plant in Napa County. Table 3.13-5, below, provides information including Milliken Reservoir's normal-year yield, multiple-dry years yield, and critical single-dry year yield. In addition, current storage volume as of January 2021 (most recent data available) is also provided.

Table 3.13-5
Milliken Reservoir Statistics

Tributary Watershed Area	6,000 acres
Average Annual Inflow	3,656 acre-feet (AF)
Total Storage Capacity (Maximum Yield)	1,390 AF
Normal-Year Yield	700 AF
Multiple-Dry Years Yield	700 AF
Single-Dry Year Yield	400 AF
Current (1/28/2021) Storage Volume	1,131 AF

Source: City of Napa 2017 and City of Napa 2021a.

State Water Project

Starting in 1966, the City has sub-contracted with NCFCWCD for imported surface water from the SWP. The SWP diverts water from the Sacramento-San Joaquin Delta at the Barker Slough Pumping Plant east of the City of Vacaville. This water is then conveyed approximately 21 miles through the North Bay Aqueduct to Cordelia Forebay to serve contractors in Napa and Solano counties. The water is treated at the Edward I. Barwick Jamieson Canyon Water Treatment Plant, in the City of Napa. The majority of this water supply is for SWP entitlements for the City of Napa and the City of Calistoga. This water is also supplied to the City of American Canyon. The City of Napa was originally granted gradually increasing annual allotments, known as "Table A" entitlements, of SWP water in its original 1966 agreement with NCFCWCD. These allotments reached a maximum of 12,500 acre-feet by 1990. However, the agreement was modified in 1982 to reduce the City's short-term entitlement but increase its final overall entitlement to 18,800 acre-feet by 2021. In 2009, the contract was amended to accelerate the entitlement schedule, and the City of Napa was granted its full 2021 entitlement of 18,800 beginning in 2010. Additionally, in 2000, the City of Napa obtained an additional 1,000 acre-feet per year of SWP water in a transfer agreement between NCFCWCD and the Kern County Water Agency. In 2006, the City of Napa purchased the City of St. Helena's 1,000 acre-feet Kern County Water Agency entitlement.

Furthermore, in 2009, the City signed a water transfer agreement with the Town of Yountville, obtaining Yountville's total SWP Table A entitlement of 1,100 acre-feet per year, along with its North Bay Aqueduct conveyance capacity. Therefore, combined, the City of Napa has a total entitlement to 21,900 acre-feet of water per year. However, actual deliveries are determined by the Department of Water Resources depending on each year's hydrologic conditions. The full entitlement amount would typically only be available during very wet years. The Department of Water Resources estimates that 62% of SWP contractors' entitlements would be available for deliver in a normal year, 29% would be available during a multi-dry year period, and 11% would be available during a single-dry year (City of Napa 2017). The current SWP contract is due to expire in 2035 with an extension to 2085 anticipated. Table 3.13-6 lists SWP estimated delivery amounts during normal, multiple-dry, and critical single-dry years.

Table 3.13-6
SWP Reliability Assumptions

Water Year Type	Projected SWP Delivery (percent of Table A entitlement)	Advanced Table A entitlement (acre-feet)	Total SWP Deliveries (acre-feet)
Normal Year	62%	-	13,578
Multiple-Dry Years	5%	3,772	6,351
Single-Dry Year	29%	-	4,867

Source: City of Napa 2017.
Note:
[1] 100% Table A entitlement is 21,900 acre-feet

Groundwater

The groundwater basin applicable to the Project site is the Napa-Sonoma Valley Basin, which is further divided into the Napa Valley Subbasin, which contains about 209,619 acre-feet of water on average. This large basin is further divided into the St. Helena Subarea, which lies under the City (Napa County 2018). Groundwater levels within the northern portion of the St. Helena Subarea remain relatively stable but exhibit greater seasonal declines of about 20 feet elsewhere in the subarea; however, lower groundwater levels have been observed in 2020 due to a relatively dry year as discussed in Section 3.9 Hydrology and Water Quality (Napa County 2017 and DWR 2021). The City owns and operates two active groundwater wells, collectively known as the Stonebridge Well Complex, located 410 and 670 feet below the surface that have a combined capacity of approximately 595 gallons per minute. These wells have the potential to provide 960 acre-feet of potable water per year if both could be operated continuously. The wells derive their water source from the Sonoma Volcanic aquifer. Being the most flexible source in the system, groundwater functions as a buffer to balance system flows based on availability of water in Bell Canyon and flow rates being delivered by the City of Napa. The City currently restricts the use of groundwater from these wells with the goal of limiting extraction to 450 AF per year for long term

sustainability. There is an existing well on the Project site that is presently not in operation (see Section 3.9, Hydrology and Water Quality for more information on groundwater resources).

City of St. Helena Safe Yield Water Supply

The City's total water supply is dependent on annual rainfall. Therefore, the City uses various sources to ensure sustainable yields. Safe yield thresholds developed by the City's Safe Yield Committee (no longer active) are summarized in Table 3.13-7, below.

Table 3.13-7
City of St. Helena Safe Yields

Source	Normal Water Year (Annual Safe Yield) (acre-feet)	Dry Year (Phase 2 Water Emergency) (acre-feet)	Critical Year (Phase 3 Water Emergency) (acre-feet)
Bell Canyon Reservoir	1,000	600	500
Stonebridge Well Complex[1]	350	514	471
City of Napa	600	600	600
Total	1,950	1,714	1,571

Source: City of St. Helena 2018.

[1] In an agreement with the environmental advocacy group Water Audit California, the City is monitoring water levels with a goal of limiting extraction to 450 AF per year on average (Napa Valley Register, 2021)

Due to the ongoing drought the City Council declared a Phase II water emergency on October 27, 2020, which went into effect on November 1, 2020. The amount of water allocated to commercial and residential uses is limited under this water emergency. Residential users are limited to 65 gallons per person per day. Single-family residences will receive an additional 2,500 gallons per month from April through October for landscape irrigation. No new water connections are allowed to be permitted during a Phase II water emergency. The director of public works is providing reports to the City Council and will recommend lifting the water emergency once adequate water supplies are available. A project may proceed through entitlement process during a water emergency, however if a building permit is issued and the City is in a water emergency, no water connection would be provided until the termination of the water emergency.

Water Treatment and Distribution

Water treatment services are provided by the City of St. Helena Water Treatment Division. Water from the Bell Canyon Reservoir is treated by three licensed water treatment operators at the Louis Stralla Water Treatment Plant (WTP), located on Crystal Springs Road in the northeastern part of the City (City of St. Helena 2015a, 2019a). The Louis Stralla WTP has a capacity of 4.3 million gallons per day (MGD). However, there are flow limitations in the inlet piping which restricts use of the plant to less than its capacity (City of St. Helena 2016). The Louis Stralla WTP typically treats 3.5 MGD due to these flow limitations (City of St. Helena 2018). The two groundwater wells that the City uses as a water source include a filtration facility, comprised of filtration tanks, chlorination

facilities, and a backwash return system (City of St. Helena 2016). Water from the City of Napa is received at the City of St. Helena's Rutherford Pump Station (City of St. Helena 2018).

Water distribution within the City is managed by the Utilities Division of the City's Public Work's Department. The Utilities Division reads water meters and conducts fire hydrant maintenance and water leak repairs and provides customer service (City of St. Helena 2019a). The City's treated water is distributed through six storage tanks, four pump stations, pumps, and a network of distribution pipelines (City of St. Helena 2016). In 2015, the City provided water service to approximately 2,312 connections (City of St. Helena 2018).

Projected Water Demand and Supply

The City of St. Helena's 2010 Water Supply Plan (Water Supply Plan[2]) includes an analysis of current and future water demands within the City. The water use habits of existing customers, land use plans providing data for expected growth, and laws and regulations that affect future water use were used to calculate future water demands. Water conservation measures were not considered in future demand calculations.

The Water Supply Plan includes projected water demands for two potential 1993 General Plan buildout scenarios, the Likely Buildout Scenario and the Full Buildout Scenario. Under the Likely Buildout Scenario, the City has the potential to construct 379 more residential dwelling units until buildout of the 1993 General Plan is reached in 2030. Under this scenario, the projected number of dwelling units was limited by the City's Growth Ordinance and not by the 1993 General Plan Land Use. However, due to a recent change in state law (Senate Bill [SB] 330) the City is no longer limiting residential development. In addition, this scenario accounts for the construction of over 277,000 square feet of commercial, retail, and institutional floor space. Under the Full Buildout Scenario, the City has the potential to construct 891 more residential dwelling units until buildout is reached in 2030. This scenario also includes adding slightly more than 338,000 square feet of commercial, retail, and institutional floor space during the term of the 1993 General Plan (City of St. Helena 2010). As noted throughout this EIR, the City adopted the 2019 General Plan in May 2019. However, since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project. Nonetheless, this EIR will also evaluate the City's adopted 2019 General Plan for informational and consistency purposes. Under the City's 2019 General Plan, it was also assumed that the allowed number of new residential units would be limited to 9 units per year, or a total of 72 units over the eight-year term of the Housing Element (2015 to 2023). As stated previously, the City is no longer allowed to limit residential development due to the passage of SB 330. The 2019 General Plan EIR determined there would

[2] The 2010 Water Supply Plan is the most recent document available; however, an Integrated Utility Master Plan is in the process of being prepared at the time of preparation of this document.

be no expected increase in water demand since new developers would be required to comply with the City's Water Neutral Policy for Development (see Section 3.9, Hydrology and Water Quality) and offset all new water demands with water conservation retrofits or in-lieu payments for the City to undertake such retrofits (City of St. Helena 2018).

Table 3.13-8 shows details for projected water supplies and demand in the City under the 2010 Water Supply Plan Likely Buildout Scenario and the Full Buildout Scenario.

Table 3.13-8
City of St. Helena Projected Water Supply and Demand

Buildout Scenario		Wet Year (40% exceedance) No WSE	Normal Year (60% exceedance) No WSE	Below Normal Year (82% exceedance) Phase II WSE	Dry Year (90% exceedance) Phase IV WSE	Critical Dry Year (100% exceedence) Phase V WSE
Annual Water Demand (acre-feet)/year						
Likely Buildout Scenario	Demand	2,350	2,350	2,115	1,674	1,321
	Supply	2,375	2,250	2,286	1,714	1,286
	Surplus (Deficit)	25	(100)	171	40	(35)
Full Buildout Scenario	Demand	2,600	2,600	2,340	1,966	1,499
	Supply	2,375	2,250	2,286	1,714	1,286
	Surplus (Deficit)	(225)	(350)	(54)	(252)	(213)

Source: City of St. Helena 2010.
Note: WSE = Water Shortage Emergency

As shown in Table 3.13-8, water supplies under both the Likely Buildout Scenario and the Full Buildout Scenario would not be sufficient to meet demands during all scenarios. The 2010 Water Supply Plan estimates that the City would likely face water supply shortages after 2020, but before 2030 under current operations (City of St. Helena 2010). Therefore, the City must consider what combination of water conservation measures, acquiring additional surface water from the City of Napa, and groundwater use can be used to meet future demands. The 2010 Water Supply Plan estimated that 495 acre-feet of metered potable water demand could be saved if water conservation measures were implemented. Recommended water conservation actions included (City of St. Helena 2010):

- Hiring a Water Conservation Coordinator
- Modifying and adopting a water rate structure that will ensure adequate program funding while encouraging water conservation by accounting for reduced water consumption in the base water rate and increasing high tier rates

- Increasing groundwater production reliability and winter pumping capacity

In 2010, the City's Safe Yield Committee was commissioned to analyze the reliability of the City's water supplies into the future. The Safe Yield Committee found that the long-term safe yield of the City's water supply is 1,950 acre-feet per year, which consists of 600 acre-feet from the City of Napa contract, a conservative 900 acre-feet from Bell Canyon reservoir, and an average use of 450 acre-feet from groundwater. As shown in Table 3.13-1, recent water usage (or deliveries as the table identifies) in the City is well below the 1,950 acre-feet target, with water usage ranging from 1,882 (2013) to 1,465 acre-feet (2016) over the last eight years. To reduce future water demand within the City, the City established a water-neutral policy, requiring future development to completely offset its water use. Future water demands estimated in the City's Water Supply Plan do not consider water conservation measures. Considering the current downward water usage trend due to water conservation measures and that future demands are required to offset their projected use, future water demand is not expected to exceed the existing policy limit of 1,950 acre-feet annual use set by the Safe Yield Committee (City of St. Helena 2011).

Wastewater

The City's Public Works Department provides wastewater collection and treatment services to the city. Wastewater in the city is collected and distributed through an over 22-mile system of 4-inch to 24-inch pipes and trunk lines and treated at the City's wastewater treatment plant (WWTP) (City of St. Helena 2014). The City currently provides sewer service to approximately 1,726 connections, of which approximately 75% are residential (City of St. Helena 2018). The WWTP, located at 1 Chaix/Thomann Lane in the southeastern portion of the city, currently has a permitted dry weather treatment capacity of 0.5 MGD. The WWTP has a permitted wet flow capacity of 2.8 MGD and treats 0.36 MGD of average wet weather flow. In 2020, approximately 0.384 MGD of wastewater was treated in the City on average. The plant provides secondary treatment for domestic and commercial wastewater from the City through a series of five ponds. Plant treatment processes include Type I and Type 2 Advanced Integrated Pond Systems, a comminuter (solids grinder), chlorine disinfection, and dechlorination. During dry weather conditions, the WWTP disposes effluent by spray irrigation onto a 90-acre grass field, and during wet weather, when irrigation fields are saturated, treated effluent is discharged into the Napa River in accordance with National Pollutant Discharge Elimination System (NPDES) permit No. CA0038016 (SFB RWQCB 2016). In 2020, the WWTP discharged approximately 54 million gallons of reclaimed water for irrigation and 13 million gallons into the Napa River (pers. comm. Erin Sanders, City of St. Helena 2021).

In 2016, the City received a cease and desist order from the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. The cease and desist order was received because the WWTP did not have the ability to implement advanced secondary treatment of waters discharged into the Napa River, a requirement imposed by the NPDES permit reissued to the

WWTP in 2016. As the plant is currently designed only to provide secondary treatment, in order to meet the RWQCB's requirements, the plant would be required to undergo modifications to achieve advanced secondary treatment. The RWQCB establishes a time schedule of no more than five years for the WWTP to undergo the necessary improvements. At this time, the City has produced a Final Feasibility Study that evaluates options to come into compliance with the reissued NPDES permit (SFB RWQCB 2016). The study details two alternatives, Alternative 1, which involves converting the WWTP's Pond 4 to constructed wetlands that would provide additional treatment through a series of physical, chemical, and biological mechanisms, and Alternative 2, which involves implementation of trickling filters for secondary treatment. Alternative 2 was ultimately recommended for further examination and detailed design in a Facility Master Plan (City of St. Helena 2016). The City has recently completed plans for modifying and upgrading the WWTP to a Title 22 Tertiary Treatment Plant identified as Alternative 2, and work on upgrading the plant is anticipated to begin sometime in Summer 2021 to be completed by late summer 2022. The City is also pursuing a recycled water distribution system for landscape irrigation. It is not known if the City has funding to implement this project.

The 2015 Facilities Evaluation for the WWTP concluded that the total WWTP capacity was sufficient when operated under design conditions. The average dry weather flow treated in 2014 was 0.36 MGD, the average annual flow treated in 2014 was 0.47 MGD, and the highest daily flow treated was 1.03 MGD during wet weather. The 2015 Facilities Evaluation indicated that as the service area population was growing only slightly and per capita wastewater flows are declining due to conservation measure, the existing WWTP capacity is sufficient in the short-term. The report projected that the 2030 average dry weather flows into the WWTP would be approximately 0.50 MGD. However, the report indicated that the capacity should be increased to 0.65 MGD by 2030 to account for uncertainty (City of St. Helena 2016). As of 2020, the average dry weather flow treated was 0.36 MGD, the average annual flow treated was 0.38 MGD, and the highest daily flow treated was 1.05 MGD during wet weather (pers. comm. Sanders. 2021).

Stormwater Drainage

The direction of stormwater flow in the city is generally from the mountain ranges to the west to the Napa River at the City's eastern boundary. This drainage is largely collected by creeks that flow into the Napa River, including York Creek and Sulphur Creek. The City's stormwater drainage system, which consists of a variety of inlet structures and collection systems, discharges into these creeks or directly into the Napa River. Drainage is collected through a system of gravity flow pipes, ditches, channels, and creeks. The City's storm drainage pipes range from 4 to 60 inches in diameter (City of St. Helena 2000). The City's Public Works Department maintains drain inlets and drain manholes. Several of the storm drainage facilities are located within sidewalks or other public rights-of-way.

At present, stormwater moves as sheet flow across the Project site. The Project site does not contain any existing storm drain infrastructure. Section 3.9, Hydrology and Water Quality evaluates capacity of the City's stormwater infrastructure and water quality impacts associated with stormwater discharge.

Solid Waste

Upper Valley Disposal & Recycling (UVD) provides solid waste services to residents and businesses within the city. UVD provides weekly residential and commercial refuse and recycling pickup and disposal throughout upper Napa County. UVD also offers a Business Food Compost Program for commercial food collection (UVD 2019). In addition, UVD provides a variety of waste reduction programs, including municipal solid waste, nonhazardous materials, mixed recycling and yard waste recycling. A single-stream recycling program accommodates a wide array of wastes including plastic, glass, steel, tin, aluminum, and most types of paper and cardboard. The agency also conducts public education to teach residents and businesses about composting and its recycling and electronic waste disposal programs (City of St. Helena 2010). As of 2016, approximately 69% of collected waste was diverted from landfills by UVD (City of St. Helena 2018).

Solid waste generated within the city is disposed of at the Clover Flat Landfill, an approximately 79-acre Class III landfill site located at 4380 Silverado Trail Road, north of the city (CalRecycle 2019). The Clover Flat Landfill has a maximum permitted throughput of 600 tons per day and total permitted site capacity of 4.9 million cubic yards. The landfill receives approximately 150-175 tons per day of solid waste on average and has an estimated remaining capacity of 2.62 million cubic yards. The facility has an estimated closure date of 2047 (CalRecycle 2018). The landfill accepts nonhazardous solid waste and inert waste; hazardous wastes, liquid wastes, sewage sludge, or infectious wastes are not accepted at this facility. The landfill accepts food waste for composting and transfer, along with mixed loads of construction and demolition materials for recycling (CFL Inc. 2018).

3.13.3 Regulatory Setting

Federal Regulations

The following federal regulations pertaining to utilities and service systems would apply to the Proposed Project.

Water

Federal Water Pollution Control Act

The Federal Water Pollution Control Act (33 USC 1251 et seq.), otherwise known as the Clean Water Act (CWA), sets forth national goals that waters shall be "fishable, swimmable" waters (CWA Section 101 (a)(2)). To enforce the goals of the CWA, the U.S. Environmental Protection Agency (EPA) established the NPDES program. NPDES is a national program for regulating and administering permits for discharges to receiving waters, including non-point sources. Under Section 1251 (b) of the CWA, Congress and the U.S. EPA must recognize and preserve the primary responsibilities and rights of states concerning the reduction of pollution in water resources.

Numerous agencies have responsibilities for administration and enforcement of the CWA. At the federal level this includes the U.S. EPA, the U.S. Army Corps of Engineers, the Bureau of Reclamation, and the major federal land management agencies such as the U.S. Forest Service and the Bureau of Land Management. At the state level, with the exception of tribal lands, the California EPA and its sub-agencies, including the SWRCB, have been delegated primary responsibility for administering and enforcing the CWA in California.

Safe Drinking Water Act

The Safe Drinking Water Act of 1974 gave the U.S. EPA the authority to set standards for contaminants in drinking water supplies. The U.S. EPA was required to establish primary regulations for the control of contaminants that affected public health and secondary regulations for compounds that affect the taste, odor, and aesthetics of drinking water. Title 22 of the California Administrative Code establishes Department of Public Health and SWRQCB implementing authority and stipulates state drinking water quality and monitoring standards.

Wastewater

National Pollution Discharge Elimination System Permit

Discharge of treated wastewater to surface water(s) of the United States, including wetlands, requires a NPDES permit. In California, the RWQCBs administer the issuance of these federal permits. Obtaining an NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality. Whether or not a permit may be issued, the conditions of a permit are subject to many factors such as basin plan water quality objectives, impaired water body status of the receiving water, historical flow rates of the receiving water, effluent quality and flow, the air quality State Implementation Plan, the California Toxics Rule, and established total maximum daily loading rates for various pollutants. These factors are highly specific to the potential discharge point. Obtaining an NPDES permit is

generally considered difficult in inland areas and may not be possible in sensitive areas. The City is within the jurisdiction of the San Francisco RWQCB and has a current NPDES permit No. CA0038016 (SFB RWQCB 2016).

Federal and State Clean Water Act

The Porter–Cologne Water Quality Control Act gives the ultimate authority over California water rights and water quality policy to the SWRCB. The Porter–Cologne Act also established nine RWQCBs to ensure that water quality on local/regional levels is maintained. The Project site is under the jurisdiction of the Central Valley RWQCB.

Stormwater

Clean Water Act

The Clean Water Act (CWA), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality (33 USC 1251 et seq.). The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA establishes basic guidelines for regulating discharges of both point and non-point sources[3] of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA. See Section 3.9, Hydrology and Water Quality, for more information.

Federal Antidegradation Policy

The federal antidegradation policy (40 CFR Section 131.12) of the federal CWA is designed to protect water quality and water resources. The policy requires states to develop statewide antidegradation policies and identify methods for implementing them. State antidegradation policies and implementation measures must include the following provisions: (1) existing instream uses and the water quality necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. State permitting actions must be consistent with the federal

[3] Point source discharges are those emanating from a pipe or discrete location/process, such as an industrial process or wastewater discharge. Non-point source pollutants are those that originate from numerous diffuse sources and land uses, and which can accumulate in stormwater runoff or in groundwater.

Antidegradation Policy. See Section 3.9, Hydrology and Water Quality, for a detailed discussion of federal stormwater regulations.

Solid Waste

Resource Conservation and Recovery Act, Subtitle D

Code of Federal Regulations, Volume 40, Part 258 (Resource Conservation and Recovery Act, Subtitle D) states criteria for the location, operation, design, monitoring, and closure of municipal solid waste landfills. The code requires states to conduct their own permitting program for landfills that follow this criteria.

State

Water

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (Porter–Cologne) gives the ultimate authority over California water rights and water quality policy to the California SWRCB. Porter–Cologne also established nine RWQCBs to ensure that water quality on local/regional levels is maintained. The city is under the jurisdiction of the San Francisco RWQCB.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610–10656). The act requires that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet per year shall prepare and adopt an Urban Water Management Plan. The City does not meet the population requirements for preparation of an Urban Water Management Plan.

Drinking Water Quality

It is the responsibility of the SWRCB and the Department of Public Health to implement the Federal Safe Drinking Water Act, as well as California statutes and regulations related to drinking water. The SWRCB inspects and provides regulatory oversights to public water systems within California, to ensure their compliance. The San Francisco RWQCB protects the beneficial uses, including municipal drinking water supply, of state waters in the San Francisco Bay area.

In accordance with Title 22 of the California Code of Regulations, public water system operators regularly monitor their drinking water sources for microbiological, chemical, radiological, and aesthetic contaminants to ensure that they do not exceed the primary maximum contaminant

levels. The amount of contaminants in drinking water needs to be disclosed to the public annually, by the water supplier, in a consumer confidence report. It is the responsibility of the water supplier to produce and distribute the report and the responsibility of the U.S. EPA to prepare annual summary reports of water system compliance.

Senate Bill X7-7

On November 10, 2009, Governor Arnold Schwarzenegger signed SB X7-7, which requires each urban water supplier to select one of four methods for achieving water conservation targets for 2020. This bill establishes a statewide goal of achieving a 20% reduction in urban per capita water use by 2020 for urban retail water suppliers. The City and its customers have been and continue to implement conservation measures that are moving the City toward desired statewide reductions. On-going statewide, regional, and City efforts, combined with natural attrition and replacement of water fixtures and appliances with more water efficient units will continue to decrease future water demand for future customers.

California Green Building Standards Code

In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (CalGreen) that requires the installation of water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. CalGreen was incorporated as Part 11 into Title 24 of the California Code of Regulations (CCR). CalGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure. All development projects must satisfy the indoor water use infrastructure standards necessary to meet CalGreen.

CalGreen requires residential and nonresidential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use inside the building by 20%. The 20% water savings can be achieved in one of the following ways: (1) installation of plumbing fixtures and fittings that meet the 20% reduced flow rate specified in CalGreen, or (2) by demonstrating a 20% reduction in water use from the building “water use baseline.”

California Model Water Efficient Landscape Ordinance and County Ordinance

In 2006, the California Legislature enacted, and the Governor signed, the Water Conservation in Landscaping Act, which required the Department of Water Resources to update the Model Water Efficient Landscape Ordinance (MWELO). On September 10, 2009, the Office of Administrative Law approved the updated MWELO, which required that a retail water supplier and county adopt the provisions of the MWELO by January 1, 2010, or enact its own provisions equal to or more restrictive than the MWELO provisions. The County of Napa adopted the MWELO as its ordinance so all water use calculations have been following the MWELO steps. The City also has a

landscaping ordinance, which issues landscaping approval after reviewing project-specific landscaping plans. The City ordinance follows the MWELO calculation methods.

California Water Code Section 525

California Water Code Section 525 requires water purveyors to install meters on all new service connections after January 1, 1992. As a result, homes constructed after January 1, 1992 all have water meters installed. California Water Code Section 527 requires water purveyors to charge for water based upon the actual volume of water delivered if a meter has been installed.

Wastewater

General Waste Discharge Requirements for Sanitary Sewer Systems

The General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems were adopted by the SWRCB in May 2006. These WDRs require local jurisdictions to develop a Sewer System Management Plan (SSMP) that addresses the necessary operation and emergency response plans to reduce sanitary sewer overflows. The WDRs require that the local jurisdiction approve the SSMP.

Stormwater

General NPDES Permits and WDRs

To enable efficient permitting under both the CWA and the Porter–Cologne Act, the SWRCB and the RWQCBs run permit programs that group similar types of activities that have similar threats to water quality. These "general permit" programs include the Phase II Small Municipal Separate Storm Sewer System (MS4)[4] Permit, the construction general permit, and other general permits for low-threat discharges. The Construction Stormwater Program and the Small MS4 Permit are administered by the SWRCB, while other general WDRs are administered by the Central Valley RWQCB. Point source discharges or other activities that threaten water quality that are not covered under a general permit must seek individual NPDES permits and/or WDRs, depending on the type, location and destination of the discharge. For these types of discharges, the initial step in the process is to submit a "Report of Waste Discharge" to the San Francisco RWQCB, who then determines the appropriate permitting pathway. See Section 3.9, Hydrology and Water Quality, for more information.

[4] A small MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that serve populations of fewer than 100,000 persons.

California Sustainable Groundwater Act

The Sustainable Groundwater Management Act is a package of three bills (Assembly Bill [AB] 1739, SB 1168, and SB 1319) that provides local agencies with a framework for managing groundwater basins in a sustainable manner. The Sustainable Groundwater Management Act establishes minimum standards for sustainable groundwater management, roles and responsibilities for local agencies that manage groundwater resources, as well as priorities and timelines to achieve sustainable groundwater management within 20 years of adoption of a Groundwater Sustainability Plan. Central to the Sustainable Groundwater Management Act is the identification of critically over-drafted basins and the prioritization of groundwater basins, the establishment of Groundwater Sustainability Agencies, and the preparation and implementation of Groundwater Sustainability Plans for medium priority, high priority, and critically over drafted basins. Groundwater Sustainability Agencies must be formed by June 30, 2017; and Groundwater Sustainability Plans must consider all beneficial uses and users of groundwater in the basin, as well as include measurable objectives and interim milestones that ensure basin sustainability. A basin may be managed by a single Groundwater Sustainability Plan or multiple coordinated Groundwater Sustainability Plans. See Section 3.9, Hydrology and Water Quality, for more information.

Solid Waste

California Integrated Waste Management Act—AB 939

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25% of all solid waste from landfill facilities by January 1, 1995, and 50% by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective county plan. They must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to $10,000–per-day fines. The City of St. Helena participates in the Upper Valley Waste Management Agency to achieve compliance with AB 939.

Mandatory Commercial Recycling – AB 341

AB 341 was adopted as part of the AB 32 Scoping Plan by the Air Resources Board pursuant to the California Global Warming Solutions Act on January 17, 2012. The regulation requires businesses that generate 4 cubic yards or more of commercial solid waste per week and multifamily residential dwellings of five units or more to arrange for recycling services. The measure focuses on increasing commercial waste diversion to reduce greenhouse gas emissions.

Mandatory Commercial Organics Recycling – AB 1826

AB 1826 was enacted in October 2014 in order to divert commercial organic waste from landfills. The measure requires businesses and multifamily residential dwellings of five or more units to recycle organic waste on and after April 1, 2016 depending on how much solid waste they generate per week. The law includes phasing of requirements over time to ensure that the minimum threshold of organic waste generation by businesses decreases gradually.

Local

City of St. Helena 1993 General Plan

The Public Facilities and Services Element of the St. Helena 1993 General Plan provides guiding policies regarding utilities and service systems, including the following:

> **Policy 9.2.1:** Approval of new development shall be contingent upon the ability of the City to provide water without exceeding the safe annual yield of its water supply system.
>
> **Policy 9.2.3:** Adopt and implement water conservation measures as a means of extending the capabilities of the City's water supply.
>
> **Policy 9.3.1:** Provide adequate sewage treatment capacity at the City treatment plant to meet the needs of population growth permitted under the City's Growth Management System.
>
> **Policy 9.3.3:** Require extension of City sewer to areas with limited sewerage capacity prior to approval of future growth in these areas.
>
> **Policy 9.4.1:** New development should provide adequate drainage improvements to handle generated storm runoff from the site to the nearest major watershed. The watersheds include York Creek, Sulphur Creek and the Napa River.
>
> **Policy 9.4.2:** If a City storm drain is available, the developer should participate in the funding to the extent it benefits the development.
>
> **Policy 9.4.3:** Extension of existing downstream drains which have adequate capacity should be completed at the developer's expense with future reimbursement for oversizing costs at the time of connection by others.

City of St. Helena 2019 General Plan ("General Plan Update 2040")

The Public Facilities and Services Element of the St. Helena 2019 General Plan provides guiding policies regarding utilities and service systems, including the following:

Policy PF1.1: Require that the approval of new development be contingent upon the ability of the City to provide water without exceeding the safe annual yield of its water supply system.

Policy PF1.2: Adopt and implement equitable water conservation measures for both residential and non-residential users so that the City can supply water within the safe yield of its water system.

Policy PF2.1: Ensure adequate sewage treatment capacity at the City treatment plant to meet the needs of population growth, taking into account the City's Growth Management System, the Regional Housing Needs Allocation, and the needs of non-residential users.

Policy PF3.1: Ensure that new developments provide adequate drainage improvements and detention to mitigate flooding from increased stormwater runoff attributable to the development.

City of St. Helena Municipal Code

St. Helena Water Conservation and Emergency Shortage Ordinances

The City has ordinances addressing water supply availability and water shortage contingencies including Chapter 13.12, Water Use and Efficiency of the Municipal Code requiring new developments to "completely offset its water requirement" by identifying residential or non-residential properties eligible for retrofitting with water efficient hardware and verifying that the required number of retrofits have been completed prior to the issuance of a certificate of occupancy. Section 13.04.220 of the Municipal Code also addresses water shortage emergency conditions.

Water Use and Efficiency and New Development Municipal Code Section 13.12.030

Chapter 13.12 of the Municipal Code Section 13.12.030 requires new development projects within the City to be water-neutral from the City-delivered water system. Prior to construction, any project is required to offset its water demand by providing for the implementation of conservation measures for existing households. The City's Municipal Code requires that this be demonstrated through a quantitative water analysis of the Proposed Project and can be achieved through any combination of on-site water conservation measures and/or off-site retrofitting and/or using well water. The quantitative water analysis must include a calculation of the baseline existing water demand, the proposed water demand, a comparison of the two and the proposed retrofits to achieve a zero water use increase from the proposed development. Specifically, new development shall completely offset its water requirement by installing city-approved ultra-low flush (ULF) toilets and associated water efficient hardware in a sufficient number of existing homes or nonresidential properties. Therefore, under this section, residential projects are required to complete toilet retrofits

or other City approved conservation measures to offset water use. This effectively locks City water demand at its current levels with the only minor climate related fluctuations. If the city council determines that retrofitting of existing residential or nonresidential buildings is impractical or constitutes an unusual hardship on an applicant, it may authorize the payment to the city of an in-lieu retrofit fee. The in-lieu fee shall be the equivalent of the cost of retrofitting a sufficient number of existing homes with the ULF toilets and other required water-saving devices. The City will administer a rebate program to retrofit existing homes using the fees collected or may use the fees for another water use efficiency purpose as approved by the city council. The Proposed Project applicant completed a Water Neutral Report included in Appendix J.

Developer Impact Fees Municipal Code Section 3.32.020

Pursuant to Chapter 3.32 of the Municipal Code Section 3.32.020, the City collects development impact fees on new development or conversions within the city to pay for public improvements related to civic improvement projects, public safety, sewer projects, water projects, traffic mitigation, and storm drainage.

Municipal Code Chapter 13.32

Chapter 13.32, Stormwater and Runoff Pollution Control of the City's Municipal Code contains the City's Stormwater and Runoff Pollution Control Ordinance. This ordinance empowers the City's Public Works Department to enforce stormwater pollution regulations, including:

- Prohibiting illicit discharges to the stormwater conveyance system;
- Establishing minimum requirements for stormwater management, including source control requirements, to prevent and reduce pollution;
- Establishing requirements for development project site design to reduce stormwater pollution and erosion;
- Establishing requirements for the management of stormwater flows from development projects, both to prevent erosion and to protect and enhance existing water-dependent habitats; and
- Establishing standards for the use of off-site facilities for stormwater management to supplement on-site practices at new development sites.

Title 16, Subdivisions, includes Chapter 16.32, Design Standards and Improvements, including Section 16.32.070, Drainage, which requires stormwater runoff from subdivisions to be collected and conveyed by an approved storm drainage system. The storm drainage system shall be designed by a registered civil engineer for ultimate development of the watershed and shall be capable of collecting and conveying runoff generated by the 10-year flood. The system shall

provide for the protection of abutting and off-site properties that may be adversely affected by any increase in runoff attributed to the development; off-site storm drain improvements may be required to satisfy this requirement. In addition, retention ponds, drainage swales and/or check dams may be required to reduce off-site peak storm flow generated by projects to the historic flow.

City of St. Helena Sewer System Management Plan

The City's SSMP was developed originally in 2006 to comply with requirements of a 2005 Order from the San Francisco RWQCB. Since then, the SSMP has been revised several times to comply with Provision D.13 of State Water Board Water Quality Order (WQO) 2006-0003 Sanitary Sewer System WDRs and the associated Monitoring Reporting Program. The SSMP was last updated in May 2016, and includes the City's sewer system management goals, operation and maintenance program, design and performance provisions, overflow emergency response plan, fat, oils, and grease control program, system evaluation and capacity assurance plan, and monitoring, measurement and program modifications.

City of St. Helena Storm Drainage Master Plan

The City's Storm Drainage Master Plan (Plan) was prepared in September 2000 to analyze the existing storm drain system within the city and to develop a long-term plan for improving the City's drainage facilities. The plan evaluates the capacity of the storm drain system to support existing development and identifies necessary improvements for future development. Preliminary cost estimates for recommended storm drainage improvements are also included to assist the City in establishing a capital improvements financing program and to confirm development impact fees. The City is in the process of completing a comprehensive update to the Plan and anticipates adoption sometime in Summer or Fall 2021.

Basin Analysis Report for the Napa Valley Groundwater Subbasin

Napa County submitted the Final Alternative Groundwater Sustainability Plan/Basin Analysis Report to the California Department of Water Resources on December 16, 2016, to meet the requirements of the 2014 Sustainable Groundwater Management Act. The report provides an analysis of the Napa Valley Subbasin, including the St. Helena Subarea, and includes groundwater management considerations and data.

City of St. Helena Source Reduction and Recycling Element

The City adopted a Source Reduction and Recycling Element to meet the requirements outlined in AB 939. The Source Reduction and Recycling Element sets forth goals that direct the City toward the solid waste diversion requirement and reduce the City's solid waste impact. The City of St. Helena participates in the Upper Valley Waste Management Agency to achieve compliance with AB 939.

3.13.4 Impacts

Methods of Analysis

The impact analysis considers the Proposed Project's effect on the demand for water supply, wastewater infrastructure and treatment, adequacy of stormwater infrastructure, and capacity of the landfill provider to attain solid waste reduction goals and compares this to the thresholds of significance listed below. The analysis considers whether existing utilities and service systems have adequate capacity and infrastructure to serve the demand generated by the Proposed Project and whether the Proposed Project would necessitate modifications to existing facilities or construction of new facilities to accommodate the increase in demand. Proposed Project demands for water, wastewater and solid waste are quantified below.

Water

Residential water demand factors are broken into two categories: single-family and multifamily. The dwelling unit demands for the 51 single-family units reflect detached homes located on an average lot of 8,330 square-feet, with individual landscaping, hardscapes, pools, and other anticipated outdoor features. Typically, single-family residences have a higher number of people per house than multi-family housing units and a larger landscaped area on a per person basis. The 25 multifamily units share common landscaped areas and have minimal or no individual landscape demand. Multifamily residences typically have a lower average number of people per unit than a single-family unit. These factors result in lower dwelling unit water demand for multi-family residential units. The Proposed Project also includes 11 accessory dwelling units (ADUs) that are treated as multifamily units for the purposes of quantifying demand. The residential unit demand factors described below reflect two distinct uses: indoor use and outdoor use.

A Water Neutral Report (Appendix J) was prepared for the Proposed Project to demonstrate compliance with the City's Water Neutral Policy. The water analysis calculates the estimated water demand of Proposed Project operation and potential water off-set measures. Indoor water usage factors used in the analysis are based on water usage from water fixtures and appliances in relation to the number of occupants as defined by the City's Water Neutral Policy. See Appendix J for a breakdown of water demand factors used to calculate total Proposed Project water demands. Note that the ADUs are not identified separately in the preliminary water calculation. However, the water demand for single family residences assumes eight persons per home, based on the City's demand factor of four bedrooms and two persons per bedroom. This assumes a higher persons per household for the purposes of calculating water demand, as compared to the City's persons per household of 2.45 to determine a project's population (City of St. Helena 2015b). Given the size of the ADUs, one to two persons would be a typical occupancy. Therefore, the residential indoor water demand calculations could accommodate an above-average size household and an occupied ADU.

Residential lots with ADUs would not have additional outdoor water demand (and may have less outdoor water demand, as the area occupied by the ADU might otherwise be landscaped).

The Proposed Project's water demand is provided below in Table 3.13-9. The Proposed Project is estimated to have a total water demand of 37.04 acre-feet per year at completion, including 17.16 acre-feet for outdoor landscaping. The impact analysis for available water supply is based on a comparison of these water demand numbers to the listed thresholds of significance. Table 3.13-10 provides a more detailed breakdown of the indoor water demand

Table 3.13-9
Proposed Project Water Demands (acre-feet per year)

Water Sources	Indoor Water Demand[1]	Outdoor Water Demand	Total Demand
Municipal Water	19.88	0	19.88
On-Site Groundwater Well	0	17.16	17.16
Total Water Demand (acre-feet)	19.88	17.16	37.04

Source: Appendix J.
Note:
[1] Existing water meters in the City do not separately track indoor and outdoor residential water use.

Table 3.13-10
Proposed Project Breakdown of Water Demand

Fixture	Flow Rate gal/min or gal/flush	Flow Duration (min., flush, load)	Daily Uses per Occupant	Number of Occupants1	Gallons per Day	Acre-feet Per Year
Showerheads	2	8	1	508	8,128	9.10
Sink Faucets	1.5	0.25	3	508	572	0.64
Kitchen Faucet	1.5	4	1	508	3,048	3.41
Toilet	1.3	1	3	508	1,981	2.22
Clothes Washer	19.7	1	0.37	508	3,703	4.15
Dish Washer	6.3	1	0.1	508	320	0.36
				Total Water Demand	17,752	19.88

Source: Appendix J.
Note:
[1] For the purposes of determining the Proposed Project's water demand, the City's demand factor is based on the number of bedrooms and persons per bedroom, which differs from the City's persons per household (PPH) to determine the number of residents a residential project would generate, which is 2.45 PPH.

Wastewater

Projected wastewater generation for the Proposed Project is based on indoor water demand calculations included in the Water Neutral Report (Appendix J) prepared for the Proposed Project. The impact analysis for available wastewater capacity is based on a comparison of this wastewater generation calculation to the listed thresholds of significance. As shown in Table 3.13-10, the

Proposed Project would result in an indoor water use of approximately 19.88 acre-feet per year during operation. This translates to a wastewater generation rate of 19.88 acre-feet per year, or 0.018 MGD (Appendix J).

Solid Waste

The impact analysis for solid waste was based on a comparison of projected solid waste demand to the listed thresholds of significance. Table 3.13-11 displays the projected solid waste demand associated with Proposed Project operation. The solid waste generation rates used for Proposed Project operation are based on default generation rates used by CalEEMod, which uses CalRecycle data. The solid waste generation rates used for Proposed Project construction are based on U.S. EPA's 2003 report Estimating 2003 Building-Related Construction and Demolition Materials Amounts. To determine the approximate amount of construction debris the square footage of development was conservatively estimated to be 733,000 square feet, with 584,000 square feet for single-family lots and ADUs and 149,000 square feet for attached housing. Using the solid waste generation rate of 0.0022 tons per square feet, the Proposed Project is estimated to produce 1,445.4 tons of construction debris (U.S. EPA 2003).

To determine the amount of solid waste generated during Proposed Project operation, generation rates provided by CalRecyle were used and include the following:

Single Family Residential = 0.0033 tons/day/dwelling unit

Multifamily Residential = 0.0013 tons/day/dwelling unit

The projected amount of solid waste generated by Proposed Project operation is 0.2251 tons per day of residential solid waste or 82 tons per year, shown in Table 3.13-11. The City encourages contractors to use recycling and/or reuse (diversion) measures to reduce the amount of construction waste and other materials sent to landfills.

Table 3.13-11
Proposed Project Projected Waste Generation

Land Use	Number of Units	Generation Rate	Waste Disposed (tons per day)
Single Family	51	0.0033	0.1683
ADU	11	0.0013	0.0143
Multifamily/Attached	25	0.0013	0.0325
		Total	0.2251

Source: CalRecycle 2018.

Thresholds of Significance

Consistent with Appendix G of the California Environmental Quality Act Guidelines, considerations for whether a significant impact may occur include whether the Proposed Project would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
- Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Impacts and Mitigation Measures

3.13-1: Would the Proposed Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities? This impact is less than significant.

The Proposed Project would require new water, sewer, storm drain, electric power, natural gas, and telecommunications infrastructure on site to serve the proposed residential development designed in compliance with City specifications. The Project site is currently not served by City utilities. The Proposed Project's on-site water, sewer, and storm drain lines are proposed to be located within the street/driveway rights-of-way within the Project site. The City's water and wastewater treatment and conveyance facilities, stormwater drainage facilities, and electric power, natural gas, and telecommunication facilities are expected to have the capacity to accommodate the demands of the Proposed Project, as discussed below.

Water Treatment

An existing 10-foot wide public water line easement containing an active 12-inch water line bisects the north/northeast portion of the Project site. This easement is proposed to be abandoned as part of the Project and the water line relocated.

The Proposed Project is proposing a looped 8-inch water main within Streets A and B that would connect to the existing water main at two locations. A new 8-inch water main is also proposed within the extension of Adams Street to connect to the existing water main at the southwest end of the Project site. An existing well is located near the southeastern end of the Project site that is proposed to be maintained in place (in proposed Lot 19) and used to provide non-potable irrigation of exterior public landscaping areas. The Proposed Project would be designed not to exceed 0.4 acre-feet/year/dwelling unit of water based on the installation of increasingly efficient and lower-water-using fixtures and appliances and irrigation systems.

The Proposed Project's demand for treated water would be supported by the City's existing water treatment and delivery infrastructure, as well as necessary improvements. As shown in Table 3.13-9, the Proposed Project is expected to generate a water demand of approximately 37.04 acre-feet per year at build out. As described in the Setting section above, the Louis Stralla WTP, which treats water that is sourced from the Bell Canyon Reservoir, typically treats 3.5 MGD (3,920 acre-feet per year) and has a capacity of 4.3 MGD (4,817 acre-feet per year) (City of St. Helena 2018). The Proposed Project's water demand would represent a minimal percentage of the treatment capacity of the Louis Stralla WTP. In addition, the Proposed Project would be served by water from the City of Napa and the City's groundwater wells, which have treatment facilities of their own. As noted in the setting section, under a contract with the City of Napa the City receives 600 acre-feet annually and may request up to 200 acre-feet of additional water supply if the City of Napa has water supplies available. Furthermore, the City's groundwater would only account for a minimal amount of water use on the Project site, as the City currently limits the use of groundwater from the City's wells in an agreement with the Water Audit.

Therefore, water treatment facilities would be able to adequately serve the potable water demand of the Proposed Project and the Proposed Project would not exceed the capacity of these facilities. The Proposed Project would be served by a variety of available water supply sources, and the Proposed Project's landscape irrigation demand would be offset through water conservation measures and use of the on-site well (see Appendix J). Pursuant to Municipal Code Section 3.32.020, the City collects development impact fees on new development to pay for public improvements related to water projects. The Proposed Project applicant would pay these fees, which would help offset any increased demands on the City's water system. Therefore, the Proposed Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. This impact would be **less than significant**.

Wastewater Treatment

Wastewater flows from the western portion of the Proposed Project are proposed to drain into an existing public manhole at the corner of Starr and Hunt Avenue via new 8-inch sewer pipes. The area

east of Starr Avenue, lower in elevation, is proposed to drain east through the Project site via new 8-inch sewer pipes, through Lot 21 within a public easement and into an existing public manhole on the adjacent parcel in the Vineyard Valley Mobile Home Park. The Proposed Project would install 8-inch sewer lines within all roadways to service the proposed residences. All sewer mains are sized to accommodate Proposed Project flows, per City standards, and designed at slopes to provide required self-cleaning velocities. Sewer laterals would be installed per City specifications.

The Proposed Project would increase the amount of wastewater requiring treatment at the City's WWTP. The Proposed Project is expected to generate approximately 0.018 MGD of wastewater during operation. The Proposed Project would not exceed the City's current permitted dry weather capacity of 0.5 MGD when combined with the average flow of 0.384 that is treated at the WWTP. Furthermore, pursuant to Municipal Code Section 3.32.020, the City collects development impact fees on new development to pay for public improvements related to sewer projects. The Proposed Project applicant would pay these fees, which would help offset any increased demands on the City's sewer system. Therefore, the Proposed Project would not result in or require the relocation or construction of wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be **less than significant**.

Stormwater Drainage

The Proposed Project would connect to the City's stormwater drainage system. The Project site drains to an existing City-owned detention basin that was constructed as part of the City's Flood Protection Project. New storm drain lines would be installed in Streets A, B, and C, and Adams Street. The southwesterly portion of the site is proposed to drain via gutter flow and proposed storm drain pipes and discharge into the existing Starr Avenue storm drain at several different locations. The remainder of the Proposed Project is proposed to drain to the northeast via gutter flow and storm drain pipes and discharge into the City's existing detention basin. The City requires that all storm drain pipes be sized to accommodate a 10-year storm within the pipe and 100-year storm within the street section.

The Proposed Project would result in an increase in stormwater runoff by converting predominantly undeveloped land to roadways, driveways, and residences, thereby increasing impervious coverage on the Project site. The Proposed Project would result in the addition of 10.91 acres of impervious surface, which is equivalent to an impervious surface coverage of 58%. The Proposed Project would be required to comply with the Bay Area Stormwater Management Agencies Association (BASMAA) requirements designed to prohibit non-stormwater discharges to storm drains and require use of Best Management Practices (BMPs) to minimize the amount of pollutants in runoff in accordance with the City's Phase II Stormwater NPDES Permit for small MS4s. The NPDES Permit includes a provision (Provision E.12) that mandates municipalities to require specified features and facilities (i.e., vegetated swales, LID features) to control pollutant sources,

control runoff volumes, rates, and durations, and to treat runoff before discharge from the site be included in development plans as conditions of issuing approvals and permits (BASMAA 2019). The Project is also designed to construct storm drains or as required, improve existing storm drains so that they have adequate capacity to carry the runoff produced by a 10-year storm. On-site storm flows from the single-family residential portion would be conveyed to the City's detention basin via underground storm drain lines varying in diameter from 15 to 30 inches. Storm runoff from the Project area east of the proposed Starr Avenue extension would be collected by 15-inch storm drains connected to the City's existing 36-inch storm drain. Stormwater flows would then be directed to the City's detention basin. Title 16 of the City's Municipal Code requires a new stormwater drainage system be designed by a registered civil engineer for ultimate development of the watershed, and to convey runoff generated by a 10-year flood event. Per Title 16, the stormwater drainage system must also be designed to provide for the protection of abutting and off-site properties, and off-site storm drain improvements may be required to satisfy this requirement. Street curbs would be designed to adequately collect and convey the runoff produced by a 100-year storm event. As indicated above, the City's detention basin was designed to accommodate stormwater runoff assuming 70% of the Project site would be developed with impervious surfaces (i.e., roads, sidewalks, homes).

Pursuant to Municipal Code Section 3.32.020, the City collects development impact fees on new development to pay for public improvements related to stormwater drainage projects. The Proposed Project applicant would pay these fees, which would help offset any increased demands on the City's stormwater drainage system. Therefore, the Proposed Project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities; this impact would be **less than significant.**

Electric Power, Natural Gas, or Telecommunications Facilities

The Proposed Project would be served by Marin Clean Energy for electricity service and Pacific Gas & Electric Company for natural gas service. Telecommunications services are offered by various service providers within the City. The Project site is located in a developed area of the City, surrounded by commercial, office and residential uses to the west and south. Electric power, natural gas, and telecommunications services all exist adjacent to the Project site and the Proposed Project would tie into these services. The Proposed Project would not require the construction of new or relocation of electric power, natural gas, or telecommunications facilities. On-site electrical, natural gas and telecommunications connections would all be installed subsurface, no overhead facilities would be provided. Therefore, impacts would be **less than significant.**

Mitigation Measures

None required.

3.13-2: Would sufficient water supplies be available to serve the Proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years? This impact would be less than significant.

On March 22, 2011, the City Council adopted the definition of "Safe Yield" as proposed by the Safe Water Yield Committee.[5] The Safe Yield Committee found that the long-term safe yield of the City's water supply is 1,950 acre-feet per year, which consists of 600 acre-feet from the City of Napa contract, a conservative 900 acre-feet from Bell Canyon reservoir, and an average use of 450 acre-feet from groundwater. As shown in Table 3.13-1, recent water usage in the City is well below the 1,950 acre-feet target, with water usage ranging from ranging from 1,882 (2013) to 1,465 acre-feet (2016) and averaging 1,637 acre-feet over the last eight years. To reduce future water demand within the City, the City established a water-neutral policy, requiring future development to completely offset its post-construction water use. As discussed in the setting section, the City is currently under a Phase II water emergency that limits the amount of water for all commercial and residential uses and does not allow approval of new water connections. At this time, it is uncertain when the restrictions will be lifted. The analysis assumes adequate water supplies would be available, but it is under the purview of the City Council to make that determination. The 1993 General Plan Policy 9.2.1 requires approval of new development be contingent upon the ability of the City to provide water without exceeding the safe annual yield of its water supply system.

All new development in the state is required to comply with CalGreen that requires the installation of water-efficient indoor infrastructure to conserve water. In addition to CalGreen, all landscape irrigation is required to comply with the water requirements set forth in the MWELO, which the City has codified in the Municipal Code. Lastly, water meters would be installed for each single-family and multifamily unit.

The Proposed Project's estimated indoor water demand is 19.88 acre-feet per year at completion during normal water years (see Table 3.13-10). The Proposed Project's landscape irrigation demand would account for 17.16 acre-feet per year. Assuming the Proposed Project's entire water demand of 37.04 acre-feet per year, adding it to the highest water demand in recent years of 1,882 results in 1,919 acre-feet, below the Safe Yield of 1,950. In addition, the Proposed Project must comply with the City's water neutrality policy. In order to comply with this policy, a Water Neutral Report (Appendix J) was prepared for the Proposed Project, which estimates proposed water demand and quantifies water off-set mitigations. The report shows that the 37.04 acre-feet per year of water that would be used during Proposed Project operation would be completely offset through a combination of using the on-site water well for irrigation needs and implementation of water conserving measures, which are detailed in Appendix J. To comply with the City's water neutrality policy, the Proposed Project applicant is required to off-set the Proposed Project's water

[5] The March 2011 report is the most current version available.

demand as a condition of approval. To comply with this requirement the Proposed Project applicant would be required to provide in-lieu funds consistent with Municipal Code Section 13.12.030, which permits payment of in-lieu fees equivalent to the cost of retrofitting a sufficient number of existing homes with ULF toilets, funding water meter replacements (smart meter upgrade), old pipeline replacement, and other City-approved projects. The City would use the in-lieu fees to retrofit existing homes or for another water use efficiency purpose as approved by the City Council.

The existing on-site agricultural well is proposed to be used to provide non-potable supplies to the separately plumbed landscape irrigation systems throughout the Project site to irrigate public and private landscaping. Historically, this well has been used to serve the irrigation needs of the vineyard located on the property but is currently inoperable. The Proposed Project's landscape water demand is estimated at 17.16 acre-feet per year, which is within the capacity of the on-site well (groundwater impacts are further discussed in Section 3.9 Hydrology). In addition, the Proposed Project would be required to comply with the MWEL Ordinance.

The City has been well below the Safe Yield of 1,950 acre-feet per year in recent years with adequate water supplies through the use of the three different water supply sources. The City has adequate water to serve the demands of the Proposed Project. In addition, as a condition of approval, the Proposed Project applicant would pay the required fees to offset the Proposed Project's water demand in addition to implementing mandated water conserving measures. Therefore, sufficient water supplies are available to serve the Proposed Project and the impact would be **less than significant**.

Mitigation Measures

None required.

3.13-3: Would adequate wastewater treatment capacity be available to serve the Proposed Project's increase in demand in addition to the provider's existing commitments? This impact would be less than significant.

The City's WWTP would provide wastewater treatment service to the Project site. The City's WWTP operates under a NPDES permit and is permitted to discharge up to 0.5 MGD during dry weather and up to 2.8 MGD during wet weather of treated effluent (City of St. Helena 2016). The Proposed Project is expected to generate an average of 0.018 MGD of wastewater. As the WWTP currently treats an average flow of 0.384 MGD, the additional 0.018 MGD combined with the current average flow of 0.384 MGD would not exceed the plant's permitted allowable average dry weather flow effluent limit of 0.5 MGD, as specified under its NPDES permit (City of St. Helena 2016). The 2015 Facilities Evaluation for the WWTP concluded that the total WWTP capacity was sufficient when operated under design conditions. The 2015 Facilities Evaluation indicated that as

the service area population was growing only slightly and per capita wastewater flows are declining due to conservation measures, the existing WWTP capacity is sufficient in the short-term. The report projected that the 2030 average dry weather flows into the WWTP would be approximately 0.50 MGD. However, the report indicated that the capacity should be increased to 0.65 MGD by 2030 to account for uncertainty (City of St. Helena 2016). The San Francisco RWQCB specifies that water treatment facilities must follow conditions under their NPDES permit. The City has been notified by the RWQCB that treatment plant upgrades and an amended permit are required as part of a cease and desist order. The capacity issues of the plant are a function of nutrient load (intensity of effluent) and dry weather flow (amount of effluent). The RWQCB has not requested that there be a moratorium on new connections to the treatment plant.

Wastewater generated by the Proposed Project is not expected to be comprised of any new or substantially different chemical constituents than those that are typically present in these types of residential projects and are not expected to be of concern regarding permitted effluent limitations for chemical parameters. Because adequate capacity is available at the WWTP to serve the Proposed Project, this is considered a **less-than-significant impact**.

Mitigation Measures

None required.

3.13-4: Would the proposed project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? This impact would be less than significant.

Construction

The Proposed Project would increase solid waste generation in the City during construction. Using the solid waste generation rate of 0.0022 tons per square feet, it is estimated that during Proposed Project construction approximately 1,612.6 tons of solid waste would require disposal. The City encourages recycling of construction debris to the extent feasible. In addition, the 2016 CALGreen Tier 1 mandatory measures require preparation of a Construction Waste Management Plan that documents the diversion of materials as required by CALGreen and at least 65% of nonhazardous construction waste would be required to be recycled or salvaged. Assuming a 6-year buildout, the amount of construction-related solid waste would be approximately 201.6 tons per year (0.55 tons per day) at maximum. The Clover Flat Landfill has a maximum permitted throughput of 600 tons per day. As the landfill receives approximately 150–175 tons per day of solid waste on average, this allows for a remaining capacity of approximately 425 tons of solid waste per day. Therefore, the Proposed Project's construction waste, conservatively assuming none would be diverted or recycled, would contribute less than 0.1% of the landfill's remaining permitted capacity per day. As this is a minimal contribution, the Clover Flat Landfill would have adequate landfill capacity for the

Proposed Project's construction debris and the Proposed Project would not impair the attainment of solid waste goals resulting in a **less-than-significant impact.**

Operation

In addition to construction waste, the Proposed Project would generate about 0.225 tons per day of solid waste during operation, as shown in Table 3.13-11. As described above, the Clover Flat Landfill has a maximum permitted throughput of 600 tons per day and a total permitted site capacity of 4.9 million cubic yards. The amount of solid waste generated during Proposed Project operation would be 0.04% of the average unused daily capacity of the Clover Flat landfill, and therefore would not exceed the capacity of the landfill. UVD provides solid waste services to residents and businesses within the City and diverted approximately 69% of collected waste from landfills in 2016 (City of St. Helena 2018). The amount of solid waste generated during Proposed Project operation would not cause the maximum permitted use capacity of the Clover Flat landfill to be exceeded. The Proposed Project would comply with the City's Source Reduction and Recycling Element solid waste diversion requirement and the California AB 939 solid waste diversion requirements. The Clover Flat Landfill provides mandated commercial recycling processing services, production of organic feedstocks for composting, and renewable energy generation. The Proposed Project would be required to comply with all applicable local and state solid waste diversion, minimization and recycling regulations. Therefore, the Proposed Project's solid waste demands would not exceed the capacity of the Clover Flat landfill or impair the attainment of solid waste reduction goals and the impact is **less than significant.**

Mitigation Measures

None required.

3.13-5: Would the Proposed Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? This impact would be less than significant.

The Proposed Project would be required to comply with federal, state, and local statutes and regulations related to solid waste during Proposed Project construction and operation. Solid waste collection would be provided by UVD and disposal and recycling would be provided at the Clover Flat Landfill. The volume and type of solid waste generated during construction and operation of the Proposed Project would be consistent with this type of residential development. As described previously, the Proposed Project would comply with the City's Source Reduction and Recycling Element solid waste diversion requirement, which addresses the solid waste reduction requirements set forth in AB 939, and the 2016 CalGreen Tier 1 mandatory measures. The Proposed Project would be required to comply with all applicable federal, state, and local statutes and regulations related to solid waste, and impacts would be **less than significant.**

Mitigation Measures

None required.

3.13.5 Cumulative Impacts

The cumulative analysis for impacts to public utilities is based on buildout of development identified in the City's 1993 General Plan. The geographic scope of the cumulative impact analysis for public utilities includes the service areas for the Louis Stralla WTP, the City's WWTP, UVD, and the Clover Flat Landfill. While the Proposed Project is required to be evaluated under the 1993 General Plan, any changes relative to the 2019 General Plan are also evaluated for informational purposes. Both the 1993 General Plan EIR and the 2019 General Plan EIR determined that cumulative impacts associated with buildout of the City related to utilities would be less than significant.

3.13-6: The Proposed Project would contribute to an increase in demand for water supply, wastewater treatment, stormwater and solid waste. The Project's contribution would not be considerable.

Past, present and probable future projects within the City are anticipated to increase demands on treated water supplies and infrastructure, wastewater treatment needs, stormwater drainage facilities and solid waste disposal, which could affect the capacity of existing facilities that serve the City and potentially necessitate improvements or expansion of these facilities which could result in environmental impacts.

Water Supply

The City's 2010 Water Supply Plan includes an analysis of current and future water demands within the city under two potential 1993 General Plan buildout scenarios, the Likely Buildout Scenario and the Full Buildout Scenario. As described in Section 3.13.2 and shown in Table 3.13-8, the City would not have sufficient water supplies available to meet demands during all scenarios. In order to analyze the reliability of the City's water supplies into the future, the City's Safe Yield Committee produced a report that calculated the long-term safe yield of the City's water supplies. The Safe Yield Committee found that the long-term safe yield of the City's water supply is 1,950 acre-feet per year, which consists of 600 acre-feet from the City of Napa contract, a conservative 900 acre-feet from Bell Canyon reservoir, and an average use of 450 acre-feet from groundwater. Over the last eight years, the City's water use was less than the 1,950 acre-feet target, averaging 1,637 acre-feet per year and never getting higher than 1,882 acre-feet in a single year. The Water Supply Plan estimated that 495 acre-feet of metered potable water demand could be saved if water conservation measures were implemented, such as hiring a Water Conservation Coordinator, modifying and adopting a water rate structure with a reduced base water rate and increasing high tier rates, and increasing groundwater production reliability and winter pumping

capacity. In order to ensure that the City's future water demand is met by its supplies, the City established a water-neutral policy, which requires all new development to completely offset its water use. With the implementation of this water-neutral policy and other water conservation measures in the City, the City has determined that future water demand is not expected to exceed the 1,950 acre-feet annual use policy limit set by the Safe Yield Committee (City of St. Helena 2011). As discussed in Impact 3.13-2, the Proposed Project would comply with the City's water-neutral policy by completing offsetting its water use from the City through the use of water conservation measures and the on-site well for landscape irrigation. Additionally, future development in the City would be required to pay for public improvements related to water projects. The Proposed Project applicant would pay these fees. Because Project impacts on a project specific level would be fully offset and future projects would also be required to fully offset their impacts, there would be no incremental cumulatively significant impacts to water supply. Therefore, the Proposed Project would not contribute to a significant cumulative impact to future water supplies and infrastructure within the City, and impacts would not be considerable resulting in a **less-than-significant cumulative contribution**.

Wastewater

As discussed previously, the City's Public Works Department provides wastewater collection and treatment services to the City, and wastewater is treated at the City's WWTP. The Proposed Project would increase wastewater generation in the City by producing approximately 0.018 MGD at buildout. The WWTP currently has a permitted dry weather treatment capacity of 0.5 MGD and a permitted wet flow capacity of 2.8 MGD. Approximately 0.384 MGD of wastewater was treated on average in 2015. The 2015 Facilities Evaluation for the WWTP concluded that the total WWTP capacity was sufficient when operated under design conditions. The 2015 Facilities Evaluation indicated that as the service area population was growing only slightly and per capita wastewater flows are declining due to conservation measures, the existing WWTP capacity is sufficient in the short-term. However, the report concluded that the capacity of the WWTP would need to be increased to 0.65 MGD by 2030 (City of St. Helena 2016). Therefore, expansion of the WWTP may be necessary to accommodate future wastewater treatment demands. All future projects in the City that would be required to pay for public improvements to the City's sewer system, including the WWTP. In the case that expansion occurs, potential environmental impacts may include ground disturbance impacts, noise impacts, water and air quality impacts and impacts to cultural and natural resources. Any impacts tied to the WWTP's daily operation would not differ substantially from current operational conditions. The WWTP would still be required to follow applicable state, federal, and local water quality regulations. This includes standards set forth by the RWQCB, designed to ensure water quality impacts and impacts to aquatic resources remain minimal. Additionally, future development in the City would be required to pay for public improvements related to water projects. The Proposed Project applicant would contribute a minimal portion of the WWTP's current wastewater treatment capacity and would pay public improvement fees. The

Proposed Project would not contribute to a significant cumulative impact to future water supplies and infrastructure within the City, and impacts would not be considerable resulting in a **less-than-significant cumulative contribution.**

Stormwater

The Proposed Project would connect to the City's existing storm drain infrastructure and would discharge stormwater into the existing Starr Avenue storm drain at several different locations. The rest of the Project site would drain to the northeast via gutter flow and storm drain pipes and discharge into the City's existing detention basin. The detention basin is designed to accept flows associated with future development within the City and has been sized to accommodate runoff resulting from development of the Project site (see Section 3.9 Hydrology for additional information on drainage).

The Proposed Project's contribution of stormwater would not contribute to a cumulatively considerable impact on stormwater and drainage facilities within the City. Therefore, the Proposed Project's contribution would not be considerable resulting in a **less-than-significant cumulative contribution**.

Solid Waste

The Proposed Project, along with other future development would be served by the Clover Flat Landfill for solid waste sorting and disposal and be served by UVD for solid waste collection and disposal. UVD provides weekly residential and commercial refuse and recycling pickup and disposal throughout upper Napa County. As of 2016, approximately 69% of collected waste was diverted from landfills by UVD (City of St. Helena 2018). The 2019 General Plan EIR determined that future development of the City through 2040 would contribute to the total capacity of the Clover Flat Landfill resulting in a significant cumulative impact on the landfill.

The Clover Flat Landfill has enough capacity to remain open until 2047. As described under Impact 3.13-4, the Proposed Project would generate approximately 0.55 tons per day during the 6-year construction period, which is less than 0.1% of the landfill's average unused daily capacity, and 0.225 tons per day of solid waste during operation, which is 0.04% of the average unused daily capacity of the Clover Flat Landfill. This would not result in a substantial reduction of the landfill's capacity or lifetime. In combination with other anticipated projects served by the landfill, these increases would be a very minimal input to the cumulative contribution to solid waste facilities. The Proposed Project would also comply with all applicable local, state, and federal solid waste regulations to minimize the contribution of solid waste to the landfill. Due to the small amount of solid waste anticipated to be generated by the Proposed Project, the Proposed Project's contribution to the cumulative impact would not be considerable resulting in a **less-than-significant cumulative contribution.**

Mitigation Measures

None required.

3.13.6 References

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3.14 TRANSPORTATION AND CIRCULATION

3.14.1 Introduction

The transportation and circulation section discusses existing and buildout transportation and circulation conditions associated with implementation of the proposed Hunter Subdivision Project (Proposed Project). The analysis includes consideration of vehicle-miles traveled (VMT), potential impacts to transit, bicycle, and pedestrians due to conflicts with existing plans or policies, hazards due to a design feature, and inadequate emergency access. In addition, an evaluation of construction impacts is also included.

Comments received in response to the Notice of Preparation included concerns regarding an increase in neighborhood traffic and the potential for traffic to use the Project site to avoid Main Street, potential lack of parking supply, safety issues for pedestrians and bicyclists, intersection improvements, potential road closures and impacts to emergency access due to the wine train passing through the City, and potential traffic impacts due to the limitations posed by the Pope Street bridge. In December 2018, the California Environmental Quality Act (CEQA) Guidelines were updated to remove evaluation of the delay that vehicles experience at intersections and on roadway segments, which is often measured using a level of service (LOS) metric. Therefore, the operational aspects of the Proposed Project that contribute to delay and congestion on local roadways is no longer considered an environmental impact under CEQA. These concerns are discussed in the Proposed Project's Traffic Impact Study (TIS) in relation to consistency with General Plan policies (see Appendix K). A copy of the Notice of Preparation and comments received is included in Appendix A.

The transportation analysis below uses the VMT metric to assess transportation impacts, per CEQA Section 15064.3(b). The TIS includes a LOS analysis for General Plan consistency and is included in Appendix K. Other sources cited are included under Section 3.14.6, References.

3.14.2 Environmental Setting

Existing environmental settings relevant to transportation and circulation are described below. These include descriptions of the roadway network, pedestrian, bicycle, and transit networks. Figure 3.14-1 illustrates the roadway system near the Proposed Project study area. Figure 3.14-2 illustrates the General Plan Roadway System for the City of St. Helena (City).

Roadway System

Characteristics of the existing street system are described below. Regional access to the Project site is provided by Main Street (SR 29), which has connections to State Route (SR 128) to/from the east, Interstate 80 (I-80) to/from the south, and Spring Mountain Road to/from the west. The Project site is located without access to roadways; however, Adams Street and Starr

Avenue would be extended to service the site. Primary access to the Project site would be provided via the eastern extension of Adams Street as well as the northern extension of Starr Avenue. Street classification data is derived from the Circulation Element of the St. Helena 2019 General Plan[1] (City of St. Helena 2019). As shown on Figure 3.14-1, the primary access points to the Project site is provided via Adams Street or Starr Avenue. The existing traffic controls and geometrics at the study area intersections are shown in Figure 3.14-2.

Main Street (SR 29) is generally a two-lane, undivided regional collector that runs north-south within the study area. There is parallel parking on both sides of the street, and two-way-left-turn-lanes between Dowdell Lane and Madrona Avenue. Main Street serves as the main thoroughfare for the City and the downtown area. The posted speed limit is 25 miles per hour (MPH), and while bicycle lanes are not provided, sidewalks exist on both sides of the street.

Silverado Trail is generally a two-lane, undivided rural throughway that runs north-south within the study area. The road is partially located in Napa County and is one of the roadways used as an alternative route due to traffic congestion along Main Street. The posted speed limit is 50 MPH, and there is Class II bicycle lanes provided, however there is no pedestrian facilities or parking permitted.

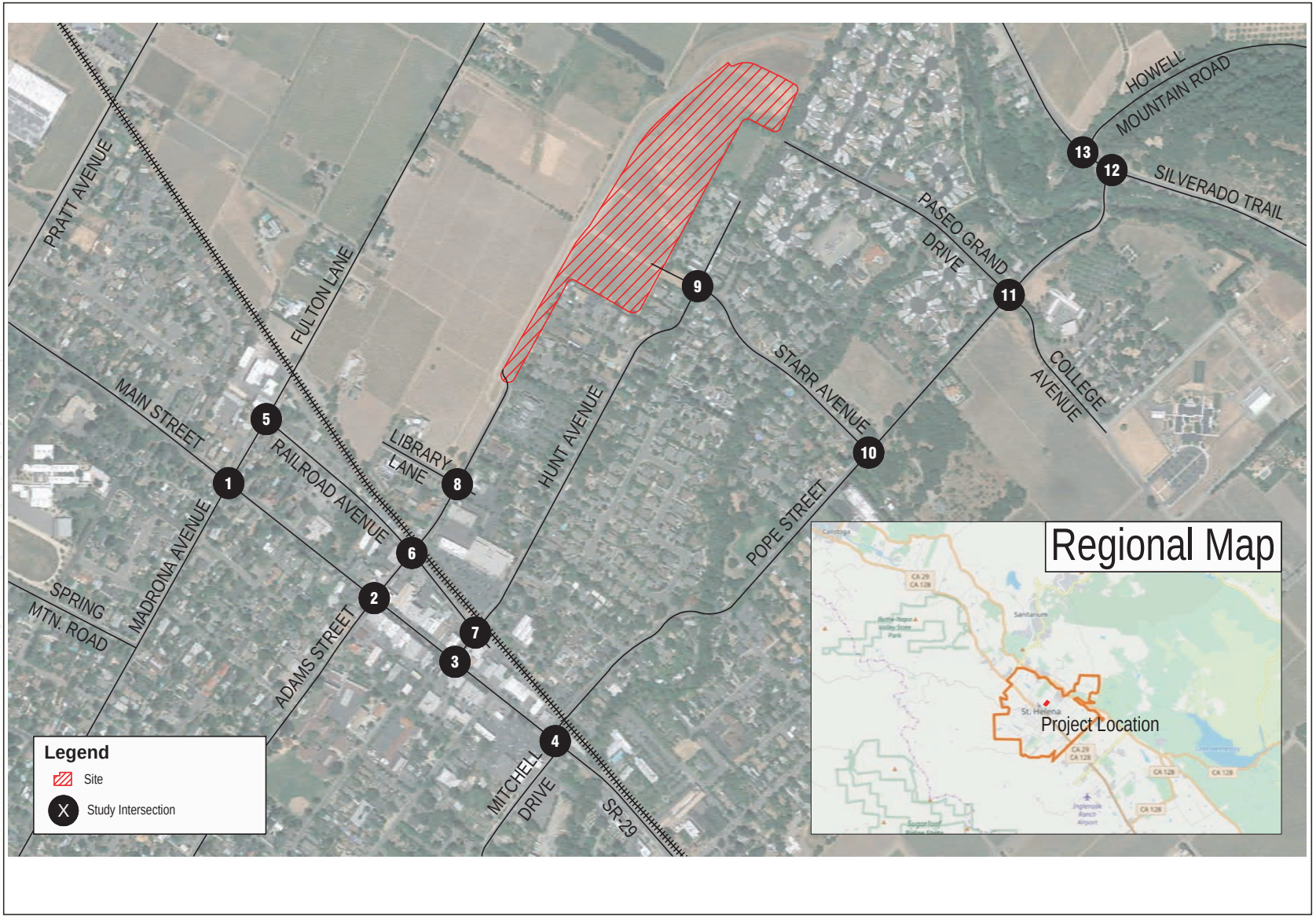
Starr Avenue is a two-lane, undivided residential street that runs north-south within the study area. The roadway dead ends at Hunt Avenue and at Pope Street and serves mainly the residential neighborhood. The posted speed limit is 25 MPH, there are Class II bicycle lanes provided, which are striped and demarcated areas of roadway that clearly separate bicyclists from motorists. Sidewalks are provided on both sides of the street and parking is available along most sections of the road.

Railroad Avenue is a two-lane, undivided downtown/mixed-use street oriented north-south that runs parallel to the railroad tracks within the study area. The roadway dead ends at Fulton Lane and south of Hunt Avenue and serves mainly the industrial and commercial uses in the downtown area. The posted speed limit is 25 MPH, and there are no bicycle lanes provided, however there are sidewalks and parking provided along most sections of the road.

Pope Street is a two-lane, undivided downtown/mixed-use street that runs east-west within the study area. The road bisects the railroad and provides a connection between Main Street and Silverado Trail, via the historic Pope Street Bridge over the Napa River.

Pope Street also serves the residential neighborhoods on the east side of the City. The posted speed limit is 25 MPH, and there are Class II bicycle lanes from Paseo Grand Drive to Church Street and Class III bicycle routes, which are areas of roadway meant to be shared equally between bicyclists and motorists. Sidewalks and parking are provided along some sections of the roadway.

[1] The 2019 St Helena General Plan is also known as the “St Helena General Plan Update 2040,” but is referred to in this EIR by the year of its adoption.



SOURCE: Google Maps,05/2017; Open Street Map, 01/2018

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FIGURE 3.14-1

Project SIte Location and Study Area

Hunter Subdivision Project

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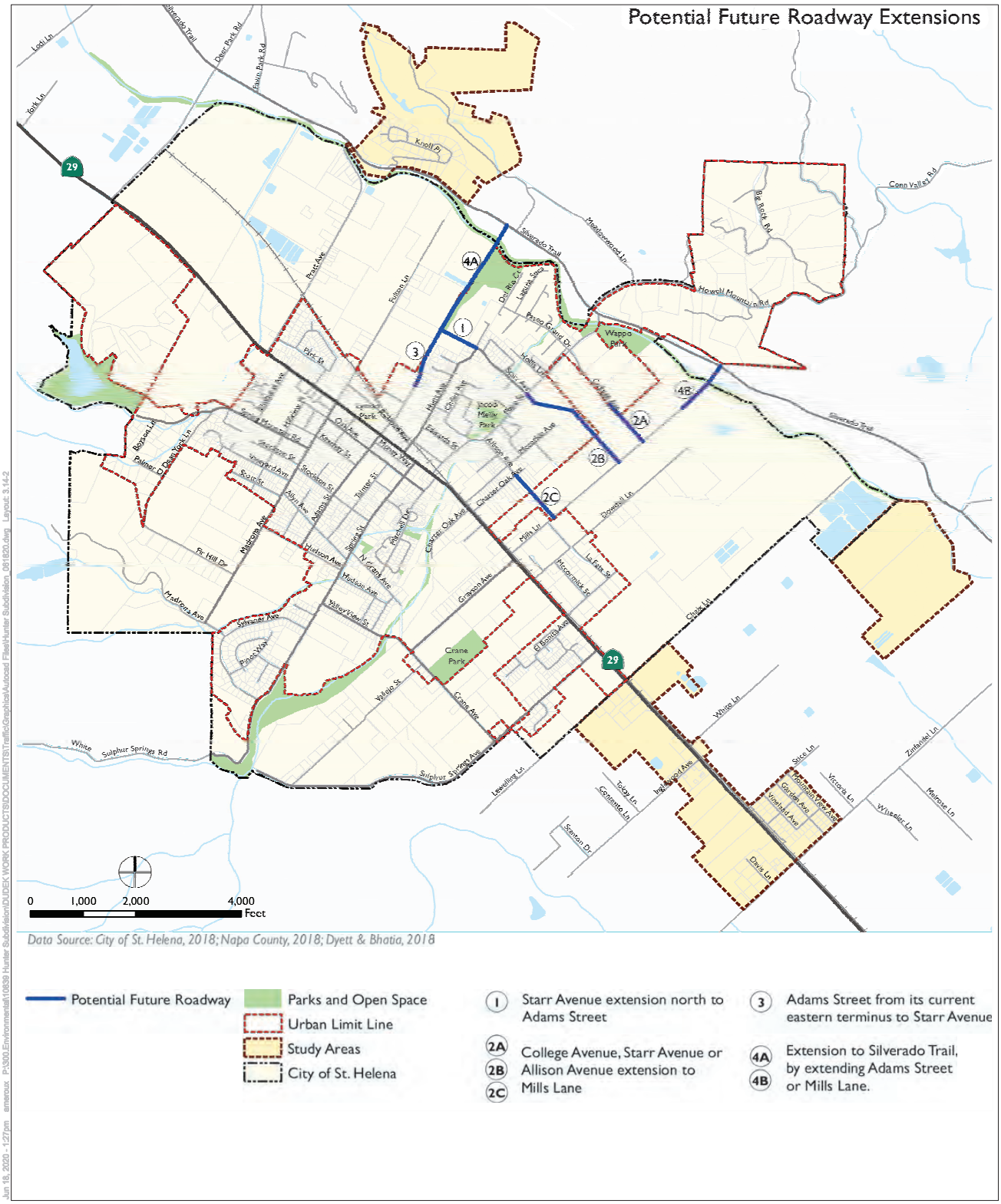

SOURCE: St. Helena General Plan Update 2040

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FIGURE 3.14-2

General Plan Future Roadway Network

Hunter Subdivision Project

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Adams Street is a two-lane, undivided downtown/mixed-use street that runs east-west within the study area. The roadway is one of the main downtown streets and bisects the railroad tracks to provide access to the residential areas west of Main Street. The posted speed limit is 25 MPH, and there are no bicycle lanes provided, however there are sidewalks on both sides of the street and parking is available along most sections of the road.

Hunt Avenue is a two-lane, undivided residential street that runs east-west within the study area. The road begins at Main Street and bisects the railroad tracks to provide access to the residential areas west of Main Street to where the road dead ends. The posted speed limit is 25 MPH, and there are Class III bicycle facilities provided, however sidewalks and parking are limited along sections of the street.

Fulton Lane/Madrona Avenue is a two-lane, open space/rural street that runs east-west within the study area. The roadway provides access to residential neighborhoods and to Spring Mountain Road. Parking is provided on most sections of the roadway, except for east of the railroad tracks along Fulton Lane. The posted speed limit is 25 MPH, and while bicycle lanes are not provided, sidewalks exist on both sides of the street

Howell Mountain Road is a two-lane, open space/rural street that runs east-west within the study area. The roadway provides a connection to Silverado Trail and a connection to wineries and residences east of the City limits. The posted speed limit is 35 MPH, and no bicycle, parking or pedestrian facilities are available.

Pedestrian Facilities

The Napa Countywide Pedestrian Plan, released August 2016, provides an inventory of existing and proposed pedestrian facilities in the City. More recently, the St. Helena 2019 General Plan also provides a detailed map of existing facilities, including an inventory of curbs, and areas that are missing adequate pedestrian facilities. The pedestrian infrastructure within the study area depends largely on the types of land uses, as agricultural or open space uses generally lack pedestrian amenities, as seen in segments of Adams Street near the edge of the Project site boundary. Around the perimeter of developed land along Starr Avenue and Hunt Avenue, the study area generally contains sidewalks, lighting, landscaping, signage, and Americans with Disabilities Act (ADA)-compliant curb ramps. Railroad crossings are generally in good condition to allow safe crossings for pedestrians. Near the Project site, Adams Street and Starr Avenue would be extended to provide vehicle, bicycle and pedestrian access to the site. Sidewalks would be provided along both sides of the street allowing safe pedestrian access to the site. The Proposed Project would facilitate accessibility to the downtown St. Helena corridor by way of existing sidewalks that would provide access to several neighborhood services such as Main Street, retail and grocery stores, and the St. Helena Public Library. Figure 3.14-3 is from the St.

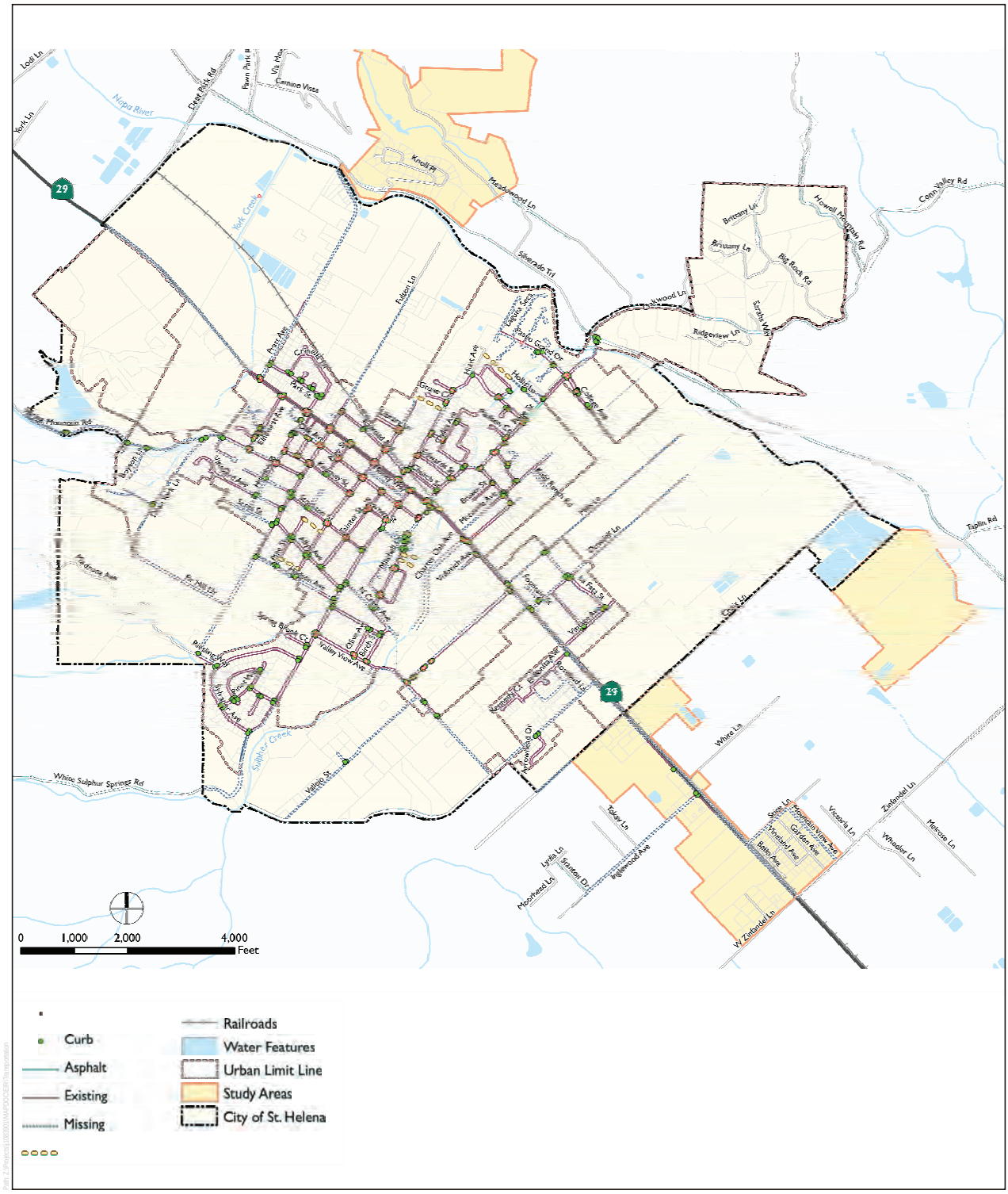
Helena 2019 General Plan and illustrates the Existing Pedestrian Facilities in the vicinity of the Proposed Project.

Bicycle Facilities

Class I bikeways, also known as bike paths or shared-use paths, are facilities with an exclusive right-of-way for bicyclists and pedestrians, separated from roadways. The Proposed Project is not proposing any Class I bike paths. Class II bicycle lanes, which are striped and demarcated areas of a roadway that separate bicyclists from motorists, are available along the entirety of Starr Avenue and Silverado Trail and the majority of Pope Street from Railroad Avenue to Paseo Grand Drive-College Avenue. Class III bicycle routes are shared roadways where vehicles and bicyclists equally share the road, but do not contain a striped bike lane. Class III bicycle routes are provided along Hunt Avenue and portions of Pope Street, east of Railroad Avenue and west of Paseo Grand Drive-College Avenue, towards the approach to the Pope Street Bridge. Along the Proposed Project access, Starr Avenue connects the site to the larger City bicycle network via Pope Street or Hunt Avenue. The Napa Countywide Bicycle Plan presents a 25-year vision for building a complete bicycling system for the community. It provides goals, objectives and policies to guide the ongoing evolution of that system. Several improvements were identified such as Class III bicycle routes along Main Street and Class II bicycle lanes along Adams Street. The Napa Valley Transportation Authority (NVTA) adopted the Countywide Bicycle Plan in October 2019, but the City has not yet adopted the plan. As part of the St. Helena 2019 General Plan, a detailed bicycle network is presented, both for existing facilities, and for the proposed 2040 bicycle facility network. Figure 3.14-4 illustrates the Proposed Bicycle Network in the vicinity of the Project site, as referenced from the St. Helena 2019 General Plan.

Transit System

The NVTA manages Vine Transit, which provides transit service in the greater Napa County region and most closely serves the Project study area and site. The St. Helena Shuttle, Vine Route 10, and Vine Route 29 all provide differing levels of frequency and connectivity to transit riders within the study area.


Napa River
York Creek
Sulphur Creek
29
Spring Mountain Rd
White Sulphur Springs Rd
Pratt Ave
Main St
Hunt Ave
Hillcrest Dr
Crane Ave
Fulton Ln
Madrona Ave
Valley View Ave
Whitehall Ln
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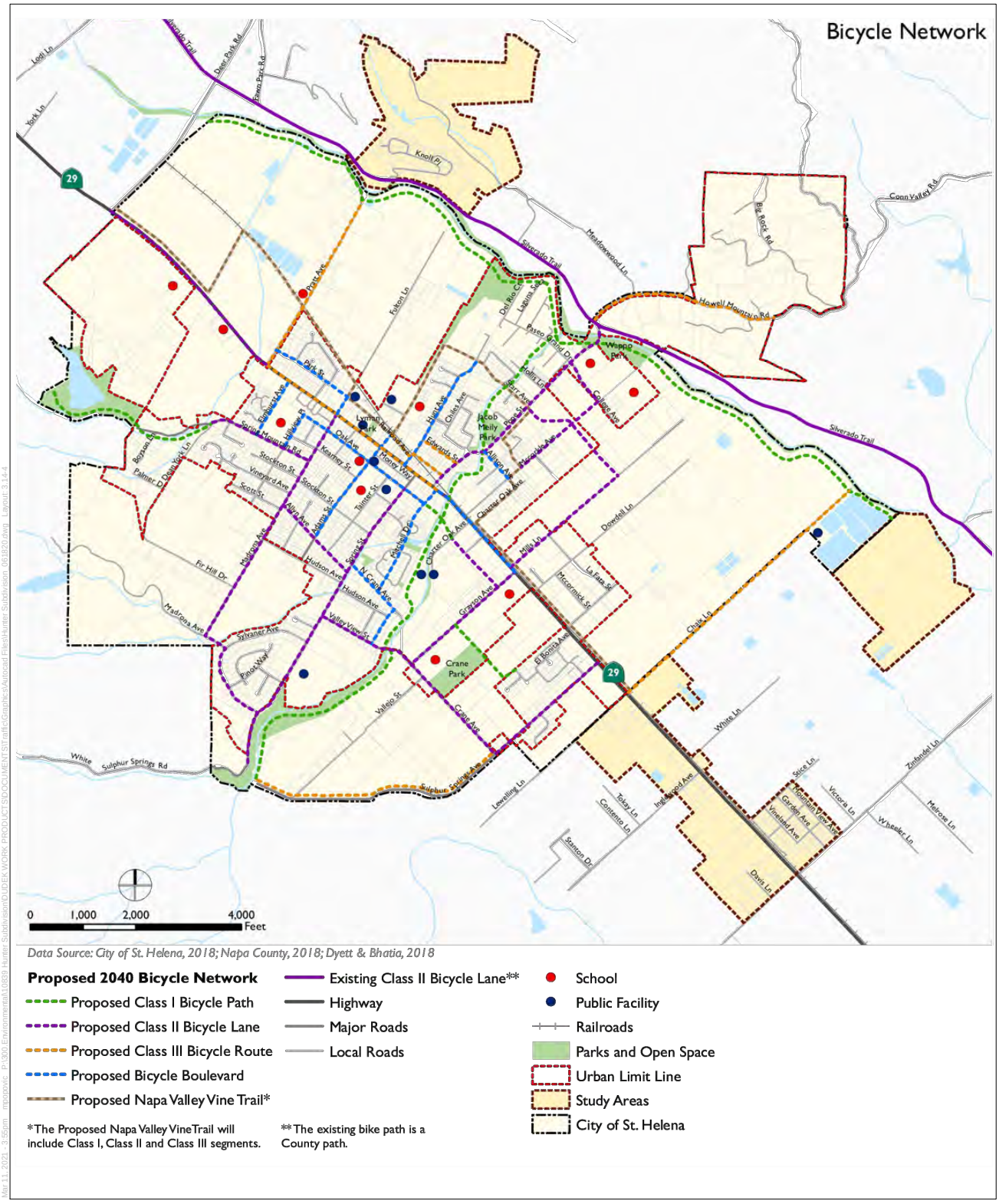

SOURCE: St. Helena General Plan Update 2040

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FIGURE 3.14-4
Proposed Bicycle Network
Hunter Subdivision Project

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The St. Helena Shuttle route operates every weekday for one morning and one afternoon on a fixed route starting at 7:50 a.m. and then again, at 3:15 p.m., circulating throughout the city and stopping directly adjacent to the Project site at the intersection of Starr Avenue/Hunt Avenue. The shuttle provides access to several schools in the city as well as an east-west connection through the city. Outside of the fixed route, the shuttle operates as an on-demand, door-to-door service within much of the city limits Monday to Thursday from 7:45 a.m. to 6:00 p.m. with extended hours Friday until 11:00 p.m. Weekend service is also provided with service on Saturdays from 10:00 a.m. to 11:00 p.m., and on Sundays from 12:00 p.m. to 7:00 p.m. Service is not provided on major holidays.

Vine Route 10 is a regional transit route that connects the cities of Calistoga and Napa, with stops within the study area along Main Street at Adams Street and at Pope Street/Mitchell Drive. Weekday service generally occurs every 45 minutes starting at 6:15 a.m. and ending at 10:45 p.m. Weekend service is provided every hour and is truncated during the morning and night periods. Service is not provided on weekends or major holidays.

Vine Route 29 connects Calistoga southward towards the greater Napa County residential core, connecting to the Vallejo Ferry and finally the El Cerrito BART station. The nearest stop within the study area is the St. Helena Post Office located on Main Street. Service is primarily provided twice during the morning and afternoon periods starting at 5:22 a.m. and ending at 6:35 p.m. Service is not provided on weekends or major holidays.

The Napa Valley Wine Train also passes through the city; however, it is mainly used as a tourist attraction and not for commuting purposes. Stops are limited and occur on an irregular basis in the city. The Wine Train's proximity to Main Street can result in increased congestion and vehicle queueing, as well as the potential to impede emergency access across Adams Street and Hunt Avenue. The Wine Train blocks egress and ingress at Adams Street and Hunt Avenue for up to two minutes at a time departing and arriving, therefore these crossings will be closed or delayed for a maximum of eight minutes per day. The Wine Train is mandated to keep all grade crossings clear; therefore, the limited speed in the area is what constitutes the delay described above.

Pope Street Bridge

The Pope Street Bridge is a narrow two-lane historic bridge that spans the Napa River and connects the City with Silverado Trail, a regional roadway that provides north-south access through Napa County. Silverado Trail also serves as an alternative route to Main Street/SR 29. The Pope Street Bridge is largely unimproved, and is constructed of stone, creating narrow lanes and reduced speed for motorists. This also creates a situation where bicyclists share the road with vehicles, creating potential areas of conflict. Operationally, the Pope Street Bridge allows for one lane of westbound traffic, creating conflicts between vehicles turning onto Pope Street versus vehicles turning onto Silverado Trail. Collisions between these conflict points were

analyzed in depth in the following sections. Additionally, emergency access can be impeded due to congestion along the bridge, creating difficulty for services to be provided to areas along Silverado Trail.

3.14.3 Regulatory Setting

Federal Regulations

There are no federal traffic and circulation regulations, plans, and policies that are applicable to the Proposed Project.

State Regulations

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law, which creates a process to change the way that transportation impacts are analyzed under CEQA. SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts from LOS and automobile delay to one that promotes the reduction of greenhouse gas (GHG) emissions, the development of multimodal transportation networks, and a diversity of land uses for transit priority areas. Under the new transportation guidelines, LOS, or vehicle delay, is no longer considered an environmental impact under CEQA and the Guidelines have been updated to include VMT as the most appropriate measure of transportation impacts. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. The OPR's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines were required to be implemented statewide on July 1, 2020. The City has not yet adopted VMT specific guidelines and significance criteria for transportation impact analysis. However, the City, along with other cities in the Napa County, are currently following OPR's CEQA VMT requirements. Therefore, this assessment uses the statewide guidelines for the Proposed Project's VMT analysis.

California Department of Transportation

As the owner and operator of the State Highway System, the State of California Department of Transportation (Caltrans) implements established state planning priorities in all functional plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local jurisdictions when proposed local land use planning and development may impact state highway facilities. Pursuant to Section 21092.4 of the Public Resources Code (PRC), for projects of statewide, regional, or area-wide significance, the lead agency shall consult with transportation

planning agencies and public agencies that have transportation facilities which could be affected by a project.

In anticipation of SB 743 implementation, Caltrans released the Draft Transportation Impact Study Guide (TISG) in February 2020, replacing the 2002 Guide for the Preparation of Traffic Impact Studies. Per the 2020 TISG, consistent with SB 743, Caltrans' primary review focus is now VMT, replacing LOS as the metric used to evaluate traffic impacts in CEQA transportation analyses. Caltrans recommends use of OPR's recommended thresholds for land use projects and recommends following the guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018).

In addition to VMT, the 2020 TISG states that it may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the State Highway System and connections with the State Highway System. Caltrans also notes that a future update of the TISG will include the basis for requesting transportation impact analysis not based on VMT and define elements to be included in non-VMT analysis. At the time of this study, this update has not been released; however, the TIS provided in Appendix K includes LOS analysis of three intersections along Main Street (SR 29) near the Project site.

Regional Regulations

Plan Bay Area 2040

Plan Bay Area 2040 (Plan), adopted in 2017, is a state-mandated, integrated long-range transportation and land use plan. The region adopted its previous plan — Plan Bay Area — in July 2013. As the Bay Area's first regional transportation plan to include a Sustainable Communities Strategy (SCS) as required by SB 375, the original Plan Bay Area (2013) charted a course for reducing per-capita greenhouse gas emissions through the promotion of more compact, mixed-use residential and commercial neighborhoods near transit. The Plan projects household and employment growth in the Bay Area over the next 24 years, provides a roadmap for accommodating expected growth, and connects it all to a transportation investment strategy that strives to move the Bay Area toward key regional goals for the environment, economy and social equity.

Applicable goals from the Plan include:

> **Goal 8:** Reduce adverse health impacts associated with air quality, road safety, and physical inactivity by 10%.
>
> **Goal 8:** Increase by 20% the share of jobs accessible within 30 minutes by auto or within 45 minutes by transit in congested conditions.

Goal 11: Increase non-auto mode share by 10%.

Goal 13: Reduce per-rider transit delay due to aged infrastructure by 100%.

Napa County General Plan

The Napa County General Plan, adopted in June 2008, serves as a broad framework for planning the future of Napa County. The General Plan provides transportation policies aimed at addressing congestion, safety, and accessibility, emphasizing alternatives to the private automobile and limited road improvements. Because the Proposed Project contributes traffic to roadways under the County's jurisdiction, the following policies from the Transportation Element area provided.

Policy CIR-6: The County's roadway improvements should minimize disruption to residential neighborhoods, communities, and agriculture.

Policy CIR-7: Roadway improvements shall be designed to conform to existing landforms and shall include landscaping and/or other treatments to ensure that aesthetics and rural character are preserved.

Policy CIR-13: The County seeks to provide a roadway system that maintains current roadway capacities in most locations and is both safe and efficient in terms of providing local access. The following list of improvements, illustrated as the County's ultimate road network in Figure CIR-1, has been supported by policy makers within the County and all five incorporated cities/town, and will be implemented over time by the County and other agencies to the extent that improvements continue to enjoy political support and funding becomes available:

- Construct safety and flow improvements to SR 29 between Oakville and St. Helena.
- Develop and implement methods to divert traffic from downtown St. Helena and Calistoga to reduce congestion and improve intra-county traffic flow.
- Install safety improvements on rural roads and highways throughout the county including but not limited to new signals, bike lanes, bikeways, shoulder widening, softening sharp curves, etc.
- Consider roundabouts as effective alternatives to stop signals or signal controlled intersections, where appropriate.

Policy CIR-17: Where traffic signals are within ¼ mile of each other, work with the agencies who have jurisdiction to synchronize the signals in order to reduce delay, improve traffic flow, and reduce energy consumption and air pollutant emissions.

Policy CIR-21: The County shall support provision of alternate (parallel) routes for local residents to avoid traffic congestion on major thoroughfares.

Objective CIR-3: The County shall work with Caltrans and other agencies to construct or designate approximately 40 miles of additional bicycle lanes in Napa County by 2030, consistent with priorities identified in the Napa Countywide Bicycle Master Plan.

Policy CIR-36: The needs of pedestrians and bicyclists shall be routinely considered and, where possible, accommodated in all roadway construction and renovation projects.

Napa Valley Transportation Authority: Vision 2040 Moving Napa Forward

The Vision 2040: Moving Napa Forward is a long-range transportation plan for Napa County, adopted in 2015. The plan establishes policy and spending priorities for the County's transportation system over the next 25 years (through the year 2040). Objectives applicable to the Proposed Project are provided.

Selected Objectives:

2.1: Design roadways and other transportation facilities to enhance coexistence of users of all modes.

2.5: Prioritize projects that expand travel options for cyclists and pedestrians as well as those projects that improve operation and safety for vehicles, pedestrians, and cyclists.

5.5: Prioritize projects that expand travel options for cyclists and pedestrians as well as those projects that improve operation and safety for vehicles, pedestrians, and cyclists.

Napa Countywide Bicycle Plan

The Napa Countywide Bicycle Plan presents a 25-year vision for building a complete bicycling system for the community. It provides goals, objectives and policies to guide the ongoing evolution of that system. The current plan was adopted in 2012 and a draft plan was released for review in February 2019. The NVTA adopted the Countywide Bicycle Plan in October 2019, but the City has not yet adopted the plan although the City did participate in the development of the plan.

Objective 2.0 Design:

Policy 2.1: Utilize Chapter 1000, "Bikeways Planning and Design," of the California Highway Design Manual, the California Manual of Uniform Traffic Control Devices, and the American Association of State Highway Transportation Officials (AASHTO) Guide for

the Development of Bicycle Facilities, as well as evolving “best practices” for the development of bicycle facilities.

Policy 2.2: Consistent with Assembly Bill 1581 (Fuller) and Caltrans Policy Directive 09-06, assure that all approaches to signalized intersections include bicycle detection devices that are operational and properly marked.

Policy 2.3: Provide consistent enhanced crossing features at uncontrolled intersections with Class I trails.

Policy 2.4: Where standard Class II bike lanes are infeasible under current conditions, consider innovative approaches to safely accommodate bicycles. (Approaches may include but are not limited to: striped edge lines, signs, shared lane markings, “road diets,” eliminating parking, etc.)

Policy 2.5: Install way-finding signage, markers, and stencils on off-street paths, on-street bikeways, local Class III routes, and State Routes to improve way finding for bicyclists, assist emergency personnel, and heighten motorists’ awareness.

Policy 2.6: Improve safety and access for bicyclists at all at-grade railroad crossings by providing appropriate enhancements such as proper track structure, safe crossing angles, track fillers, lighting, and adequate warning and guidance information among other features.

Objective 5.0 Safety and Security:

Policy 5.2: Focus on improving safety at intersections by using or installing routine pedestrian signal cycles; pedestrian push buttons; high-visibility crosswalk markings; appropriate warning and directional signs; and reassurance or directional markings for bicyclists such as shared lane markings, skip lines, etc.; and through the use of focused education.

Policy 5.3: Focus on improving safety at railroad crossings by providing safe track crossing angles for bicyclists, using concrete panels and flange way fillers to avoid surface irregularities, and through the use of quad crossing gates and warning signs.

Objective 9.0 Maintenance:

Policy 9.5: Maintain geometry, pavement surface condition, debris removal, markings, and signage on Class II and Class III bikeways to the same standards and condition as the adjacent motor vehicle lanes.

Local Regulations

City of St. Helena 1993 General Plan

The Transportation Element of the St. Helena 1993 General Plan provides guiding policies regarding transportation that are applicable to the Proposed Project, including the following:

General Plan Street System

Policy 5.3.2: Add the following streets to the existing system:

- Adams Street from its current eastern terminus to Silverado Trail
- McCorkle Avenue from Mariposa Lane to the extension of Starr Avenue
- Oak Avenue from Mitchell Drive to Grayson Avenue
- Library Lane from its current terminus to Fulton Lane
- An unnamed new street located east of Edwards Street connecting Hunt Avenue and Pope Street
- Starr Avenue from the extension of Adams Street to the Urban Limit Line

Policy 5.3.3: Preserve rights-of-way for future collector streets within the planning area of the City as follows:

- Starr Avenue from Pratt Avenue to Adams Street and from the Urban Limit Line to Dowdell Lane
- Mills Lane from SR 29 to Starr Avenue, including a potential realignment with Grayson Avenue at SR 29
- Oak Avenue from Vidovich Avenue to Grayson Avenue

The City recognizes that development may or may not proceed along the lines envisioned in this plan, and that some areas not currently identified for potential development may in fact precede those that are so designated. The intent of the right-of-way preservation designation is to clearly define the interest of the City in maintaining the option for extending its collector street system into these areas. Special setback areas shall be established along collector streets to allow for future widening.

Roadway Improvement Standards

Policy 5.5.2: Local streets in newly developing areas should be laid out in a manner consistent with the grid system currently in place in the older portions of St Helena and

in conformance with adopted City standards. Care should be taken to insure that these grids contain enough discontinuity to discourage their use by non-local traffic. Local streets should have a paved width of 36 feet with a ten-foot wide area adjacent to curb for sidewalk and landscaping.

Pedestrian Routes and Bikeways

Policy 5.8.1: All new development on collector streets shall provide sidewalks or walkways to be located with the City's right-of-way for the collector street. Further, unless exempted or deferred by the City Council, all residential developments shall provide sidewalks on all local streets within the development

It is a goal of the City that it continues to remain at a size where the majority of development is within a 10 minute walk of downtown. Sidewalks or walkways will reinforce the pedestrian orientation of the City.

Improvements and Phasing

Policy 5.10.1: All new collector streets shown in the Circulation Diagram shall be constructed as development occurs along the proposed streets. The exception to this policy is that the City Council may require additional construction to reinforce system continuity.

Policy 5.10.2: The City desires that the Adams Street extension to Silverado Trail be completed in an expeditious manner; the City will work with potential developers to acquire the needed combination of public and private financing required to implement this project.

Policy 5.10.3: The City shall collect Traffic Mitigation Fees to assist in financing improvements to the citywide circulation system.

St. Helena 2019 General Plan ("General Plan Update 2040")

The Circulation Element of the St. Helena 2019 General Plan provides the framework for a comprehensive and multimodal transportation network along with standards and guiding principles for implementation of transportation improvements. While the City's 1993 General Plan would still apply to the Proposed Project because this General Plan was in effect when the Proposed Project application was deemed complete in September 2011, the following objectives and policies from the City's 2019 General Plan are provided for informational purposes.

Goals

(b) Provide a complete bicycle and pedestrian network between residential areas, downtown, recreational open space areas, and other major activity centers identified by the City.

(h) Provide a safe, efficient, and well-maintained circulation system that supports safe and efficient travel for all modes and users.

Relevant policies and implementing actions include:

Balanced and Multimodal System

Policy CR1.1: Promote a connected street and bicycle and pedestrian network within the city to provide better internal automobile, bicycle, and pedestrian connections for residents.

- **Action CR1.C**: Evaluate the following new connections to promote increased bicycle, pedestrian, and non-automobile-based transportation, consistent with the requirement for the preparation of a "Special Study" as described in the Circulation Element. Where feasible, preserve existing rights-of-way.
  - Starr Avenue extension north to Adams Street
  - Consider three options for a connection to Mills Lane: a) Starr Avenue extension to Mills Lane; b) College Avenue extension to Mills Lane; or c) Allison Avenue extension to Mills Lane
  - Adams Street from its current eastern terminus to Starr Avenue
  - Consider two options to connect downtown St. Helena to Silverado Trail: a) Adams Street extension to Silverado Trail; b) Mills Lane extension to Silverado Trail

Policy CR1.4: Develop and use, in addition to intersection level of service standards, performance measures that consider all road users to determine transportation impacts of new development.

Policy CR1.5: Avoid mitigation measures that negatively impact the walking and bicycling environment and encourage driving.

Policy CR1.11: Establish a multimodal transportation impact fee program as part of the City's existing transportation impact fee, to finance and implement project mitigations that help achieve the City's traffic reduction goals. As part of the multimodal transportation impact fee program, require new development to analyze travel demand and finance and construct all required off-site circulation improvements, including

proposed road extensions, necessary to mitigate impacts to reduce the severity of cumulative transportation impacts to all modes of travel.

Comprehensive Pedestrian and Bicycle Network

Policy CR2.2: Promote walking and bicycling as safe and convenient modes of transportation.

Policy CR2.4: Preserve and enhance pedestrian connectivity and safety throughout St. Helena.

Policy CR2.6: Encourage walking and bicycling trips to St. Helena schools.

Sustainable Mobility Practices

Policy CR3.2: Support the implementation of NVTA goals to reduce/restrain growth of automobile vehicle miles traveled (VMT).

Policy CR3.3: Shift travel from single-occupancy vehicles to other modes so that by 2040, 45 percent of work trips by St. Helena residents and workers are by carpool, transit, walking or bicycling.

Safe and Well-Maintained Circulation System

Policy CR4.2: Ensure safety on residential neighborhood streets to promote walking and bicycling and preserve neighborhood livability.

Policy CR4.3: Continue efforts to calm traffic and minimize traffic volumes and speeds in residential areas.

Improvements and Phasing

Policy CR6.2: Require concurrent infrastructure development for any new development projects that have impacts on the circulation system, including streets, paths, trails, sidewalks, and public transit.

Policy CR6.3: Consider requiring dedications and mitigations in addition to traffic mitigation fees for any development that occurs adjacent to proposed streets corridors in order to reinforce circulation system continuity. Traffic mitigation fees are necessary to mitigate existing traffic congestion and congestion caused by new development. Consider revising fee schedules to fund needed vehicular, bike, and pedestrian improvements in order to

appropriately mitigate impacts. The fee schedule must be based on an established "nexus" between new development and the planned improvements.

The Public Health, Safety, and Noise Element of the 2019 General Plan includes the following policy related to circulation:

> **Policy PS4.6:** Ensure that all streets and roads are adequate in terms of width, turning radius, and grade in order to facilitate access by City firefighting apparatus, and to provide alternative emergency routes of ingress and egress.

City of St. Helena Municipal Code

The City's Municipal Code, Chapter 12, Streets, Sidewalks and Public Places, Chapter 16, Subdivisions and Chapter 17, Zoning, include requirements applicable to the Proposed Project. Section 12.12.050 states that projects are required to prepare a temporary traffic control plan for construction activities, to be approved by the City's traffic engineer. Section 16.32.060 states the requirements for subdivisions in creating adequate circulation and standards to preserve the public health, safety and welfare. Section 17.124.030 provides the minimum number of parking spaces required for residential projects. Section 3.32.100 states the components of the City's traffic mitigation impact fee program and the role the City's impact fee study plays in establishing the costs associated with new development.

Chapter 10.36 defines the City's truck traffic routes that apply to heavy trucks associated with construction activities and chapter 8.24, Noise, sets forth days and times when construction-related noise is allowable and construction activities can occur in the city.

3.14.4 Impacts

Methods of Analysis

This section describes the analysis techniques, assumptions, and results used to identify potential impacts of the Proposed Project on the City's transportation and circulation system. As stated in Chapter 2, Project Description, the Proposed Project is only requesting approval of a Tentative Subdivision Map at this time to subdivide the Project site into 51 single-family lots with 11 of the 51 lots developed with an ADU and a 3.4-acre lot designated for 25 multifamily units. Subsequent discretionary approvals would be required in order to commence site clearing, grading and construction.

Vehicles Miles Traveled

As described in Section 3.14.2, OPR prepared a comprehensive update to the CEQA Guidelines in 2017 that were approved by the California Natural Resources Agency in

December 2018, requiring that lead agencies use VMT for analyzing transportation impacts. CEQA Section 15064.3 of the Guidelines, states compliance will be required beginning July 1, 2020 and that "generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts" and define VMT as "the amount and distance of automobile travel attributable to a project." It should be noted that "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). Other relevant considerations may include the effects of a project on transit and non-motorized traveled.

As mentioned above, the City has not adopted methodologies for performing VMT analysis per SB 743. Therefore, the following VMT assessment has been prepared consistent with OPR's December 2018 Technical Advisory (2018), the NVTA regional travel demand model (Solano-Napa Activity Based Model – SNABM), and discussions with City staff.

The following outlines the primary methods used to conduct the VMT analysis:

1. Determine whether the project can be screened out from further VMT analysis and presumed to have a less-than-significant impact by comparing the project features to screening criteria presented in the OPR Technical Advisory.
2. If the project is not screened out, determine the VMT per capita (for residential projects) using the VMT Screening Maps from the SNABM travel demand and forecasting model available at https://arcg.is/1nea4W.
3. Compare the project results to the applicable or most appropriate threshold as directed by the City. For the Proposed Project, the VMT/capita is compared to the Citywide average to determine if the Proposed Project would have a potentially significant impact.

Screening for Land Use Projects

To provide guidance on how to conduct a VMT analysis, OPR released *Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory). The Technical Advisory suggests that agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance... recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (CEQA Guidelines, Section 15064.7, subd. (c)).

- *Screening Threshold for Small Projects (110 daily trips or less):* Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan,

projects that generate or attract fewer than 110 trips per day[2] generally may be assumed to cause a less-than significant transportation impact. Based on Proposed Project's trip generation shown in Table 3.14-1, more than 110 trips per day would be generated; therefore, it would not screen out using the small project criteria.

- *Map Based Screening for Residential and Office Projects*: Residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Per the Technical Advisory, maps created with VMT data, from a travel survey or a travel demand model, can illustrate areas that are currently below threshold VMT. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis. The Proposed Project's VMT per capita would exceed the Citywide average VMT per capita, and therefore the Proposed Project would have a potentially significant impact.
- *Presumption of Less-than-Significant Impact Near Transit Stations*: The Project site is not located within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor. Proposed CEQA Guideline Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop[3] or an existing stop along a high quality transit corridor[4] would have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project would still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:
    - Has a Floor Area Ratio (FAR) of less than 0.75;

[2] CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

[3] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

[4] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

From review of pre-COVID frequency of transit services provided by Vine Transit Route 10, Vine Route 29 and St. Helena Shuttle near the Project site, the Proposed Project is not located near a major transit stop or high-quality transit corridor. Therefore, the presumption of less-than-significant VMT impact near a transit station would not apply.

- *Presumption of Less-than-Significant Impact for Affordable Residential Development*: The Technical Advisory notes that adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT.[5,6] In areas where the existing jobs housing match is closer to optimal, low income housing nevertheless generates less VMT than market- rate housing.[7,8] Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less-than-significant impact for a 100% affordable residential development (or the residential component of a mixed-use development) in infill locations. Furthermore, a project which includes any affordable residential units may factor the effect of the affordability on VMT into the assessment of VMT generated by those units. The Proposed Project includes 25 multifamily units designated to meet affordable housing requirements which would account for 28.73% affordable housing; however, this would not meet the Technical Advisory's recommended screening criteria of 100% affordable housing. Therefore, presumption of a less-than-significant VMT impact for affordable residential development is not applicable.

[5] Karner and Benner (2016) The convergence of social equity and environmental sustainability: Jobs housing fit and commute distance ("[P]olicies that advance a more equitable distribution of jobs and housing by linking the affordability of locally available housing with local wage levels are likely to be associated with reduced commuting distances").

[6] Karner and Benner (2015) Low-wage jobs-housing fit: identifying locations of affordable housing shortages, available at https://regionalchange.ucdavis.edu/sites/g/files/dgvnsk986/files/inline-files/Urban%20Geography%20benner%20karner.pdf.

[7] Chapple et al. (2017) Developing a New Methodology for Analyzing Potential Displacement**,** available at https://www.arb.ca.gov/research/apr/past/13-310.pdf.

[8] CAPCOA (2010) Quantifying Greenhouse Gas Mitigation Measures**,** pp. 176-178, available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/capcoa-quantifying-greenhouse-gas-mitigation-measures.pdf.

Therefore, the exceptions listed above are not applicable to the Proposed Project.

As outlined above, the Proposed Project does not meet the screening criteria identified in the Technical Advisory. Therefore, an assessment of the Proposed Project's VMT impact under base year conditions has been provided using available significance thresholds and guidance from OPR and the Technical Advisory.

Methodology for VMT Estimation

For residential projects, such as the Proposed Project, the Technical Advisory indicates that "tour- and trip-based approaches offer the best methods for assessing VMT from residential/office projects and for comparing those assessment to VMT thresholds." Tour-based assessments are recommended, when available, as they typically capture a more comprehensive representation of travel behavior; however, when tour-based tools or data are not available, the Technical Advisory indicates that "…trip-based assessment of VMT can serve as a reasonable proxy."

The recent update to the NSABM model is an activity-based model (i.e., tour-based) that provides VMT estimates for traffic analysis zones (TAZ) as well as the VMT average for cities within the Napa County. Therefore, the average VMT/capita at the TAZ level within which the Proposed Project is located was used for comparing the VMT thresholds for the City. The VMT maps available for Napa County from NSABM were used to determine the VMT/capita in the TAZ in which the Proposed Project is located.[9]

Project Trip Generation

Trip generation estimates for the Proposed Project were calculated based upon trip rates provided in the Institute of Transportation Engineers' Trip Generation, 10th Edition (ITE 2017). Average trip generation rates represent weighted averages from studies conducted throughout the United States and Canada since 1980 that surveyed the identified use.[10] For example, "single-family detached housing," which has the highest trip generation rate per dwelling unit of all residential uses, specifically identifies all detached homes on individual lots, with a typical site being a suburban subdivision.

Trip rates for accessory dwelling units (ADUs) are not widely available, and if they are, the rates are unreliable due to the limited (low) number of studies provided. Therefore, in order to

[9] The VMT map is available on following link: https://www.arcgis.com/home/webmap/viewer.html?webmap=765f96cb16d34c8486eaf995012e14ec&extent=-122.554,37.9494,-121.5659,38.6993

[10] Single-Family and multifamily land uses are based on surveys and weighted averages. Rates are not based on a specified number of bedrooms or vehicles per household.

conservatively estimate traffic generated from those uses, the ITE multifamily housing rate was used for the ADU rate. Since the ITE multifamily housing rate was used for the proposed ADUs, the ITE single family detached housing rate was used for the proposed multifamily units which assumes that these units may generate more traffic than the proposed ADUs. This would provide for conservative daily and peak hour trip generation estimates of the Proposed Project. The calculation of Proposed Project trip generation estimates for weekdays and Saturday are shown in Tables 3.14-1 and 3.14-2, respectively.

As shown in Table 3.14-1, during a weekday the Proposed Project would generate 798 daily trips, 62 AM peak hour trips (16 inbound and 46 outbound), and 82 PM peak hour trips (52 inbound and 30 outbound).

Table 3.14-1
Weekday Proposed Project Trip Generation

Trip Generation Rates[1]								
			AM Peak Hour			PM Peak Hour		
Land Use	*Daily Trip Rate*	*Unit*	*% In*	*% Out*	*Total*	*% In*	*% Out*	*Total*
Single-Family Detached Housing (ITE Code 210)	9.44	DU	0.19	0.56	0.74	0.62	0.37	0.99
Multifamily Housing (Low-Rise) (ITE Code 220)	7.32	DU	0.11	0.35	0.46	0.35	0.21	0.56

Trip Generation									
				AM Peak Hour			PM Peak Hour		
Land Use	*Total No. of Units*	*Unit*	*Daily*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Single-Family Detached Housing	51	DU	481	10	28	38	32	19	51
Accessory Dwelling Units	11	DU	81	1	4	5	4	2	6
Multifamily Housing[2]	25	DU	236	5	14	19	16	9	25
Total Trip Generation			798	16	46	62	52	30	82

Notes:
1 Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017.
2 Reflects use of a single-family home to provide a conservative estimate.
Source: ITE 2017; Dudek 2020.

As shown in Table 3.14-2, during a Saturday the Proposed Project would generate 815 daily trips, and 80 peak hour trips (40 inbound and 40 outbound).

Table 3.14-2
Saturday Proposed Project Trip Generation

Trip Generation Rates[1]					
			Peak Hour		
Land Use	*Saturday Trip Rate*	*Unit*	*% In*	*% Out*	*Total*
Single-Family Detached Housing (ITE Code 210)	9.54	DU	0.47	0.47	0.93
Multifamily Housing (Low-Rise) (ITE Code 220)	8.14	DU	0.35	0.35	0.70

Trip Generation						
				Peak Hour		
Land Use	*Total No. of Units*	*Unit*	*Daily*	*In*	*Out*	*Total*
Single-Family Detached Housing	51	DU	487	24	24	48
Accessory Dwelling Units	11	DU	90	4	4	8
Multifamily Housing[2]	25	DU	239	12	12	24
Total Trip Generation			815	40	40	80

Notes:
[1] Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017.
[2] Reflects use of a single-family home to provide a conservative estimate.
Source: ITE 2017; Dudek 2020.

Proposed Project Trip Distribution and Assignment

Proposed Project trips were distributed to the study area intersections using the existing travel patterns and logical commute routes for Proposed-Project-related traffic. Project trips were assigned to the study area intersections by applying the Proposed Project trip generation estimates to the trip distribution percentages at each study area intersection. Single-family units and ADUs were distributed and assigned together, as shown on Figure 3.14-5, while multifamily housing was distributed and assigned separately, as shown on Figure 3.14-6. The total Proposed Project trip assignment is shown in Figure 3.14-7. The Proposed Project's trip distribution and assignment for Saturday includes all uses combined and is shown on Figure 3.14-8.

Planned Pedestrian and Bicycle Facility Improvements

The pedestrian infrastructure within the study area would remain largely unaffected by the Proposed Project. As Starr Avenue is extended northward and Adams Street extended eastward, additional sidewalks connecting the Proposed Project to the surrounding area would provide pedestrian access to the surrounding residential community. Additionally, the NVTA has plans for the Vine Trail, a network of bicycle and pedestrian paths that will eventually connect all Napa County communities, with construction in the City anticipated to begin as early as 2021. The Vine Trail, as tentatively proposed, would proceed through sections of the Project site by way of Adams Street and Starr Avenue.

Transit System

The NVTA has published a report, *Vision 2040 Moving Napa Forward Transportation Plan*, which outlines policies to improve system safety of all users, serve the transportation needs of all users regardless of age, income or ability, and to improve overall reliability of the transit system. As the shift from one-car trips to multi-modal and active transportation uses increases, the plan would require collaboration with the City and other jurisdictions to modify service as needed to serve the community. The plan would also promote the Vine Trail as an active transportation use, and along with the 2019 General Plan's "Complete Streets" approach, improve overall connectivity, ease of access, and safety for all members of the community.

The Wine Train is not expected to increase frequency or add stops within the city, and additional commuter or freight train traffic is not expected to occur by 2040.

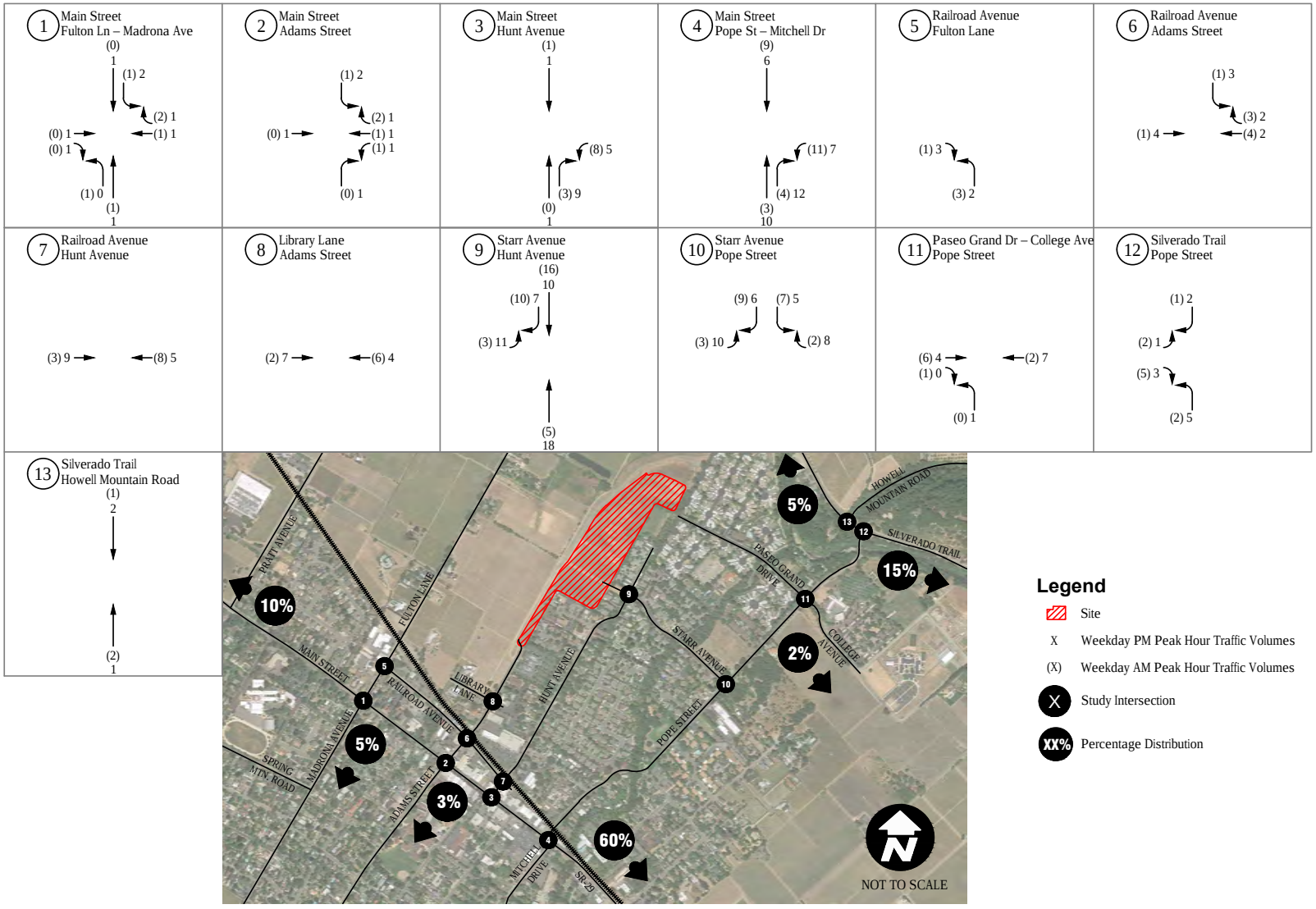
Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves, or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

VMT CEQA Analysis

The updated State CEQA Guidelines do not establish a significance threshold for evaluating VMT impacts; however, OPR's Technical Advisory recommends a threshold of significance for residential, office and other land uses. While the recommended threshold for per capita or per employee for residential or office projects, respectively, is 15% below that of existing development, lead agencies can use more location-specific information to develop their own specific threshold for other project/land use types.



SOURCE: Google Maps 2017

FIGURE 3.14-5

Project Trip Distribution & Assignment - Single Family & Accessory Dwelling Units

Hunter Subdivision Project

DUDEK

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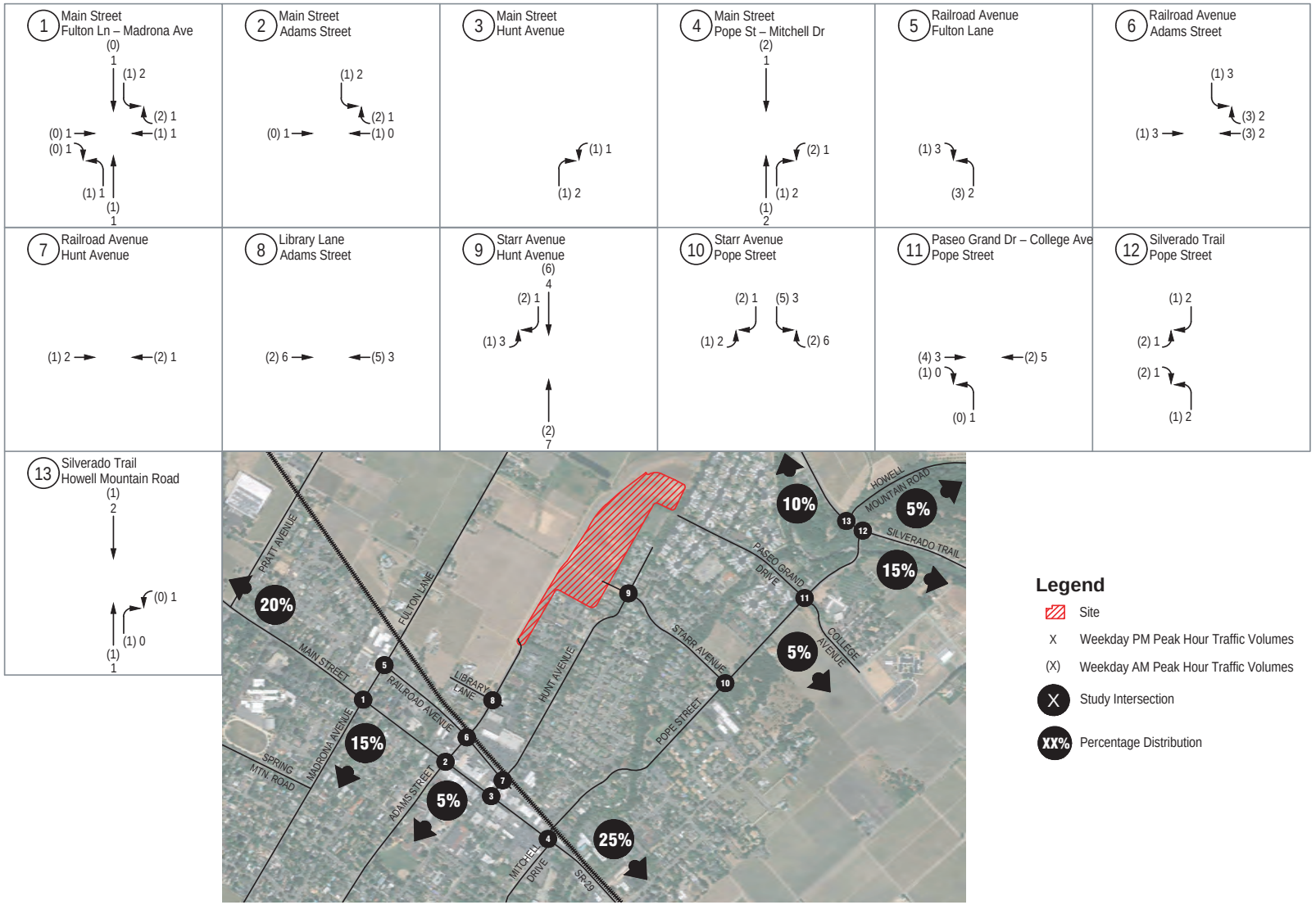

SOURCE: Google Maps,05/2017

FIGURE 3.14-6

Project Trip Distribution & Assignment - Multi-Family Housing

Hunter Subdivision Project

DUDEK

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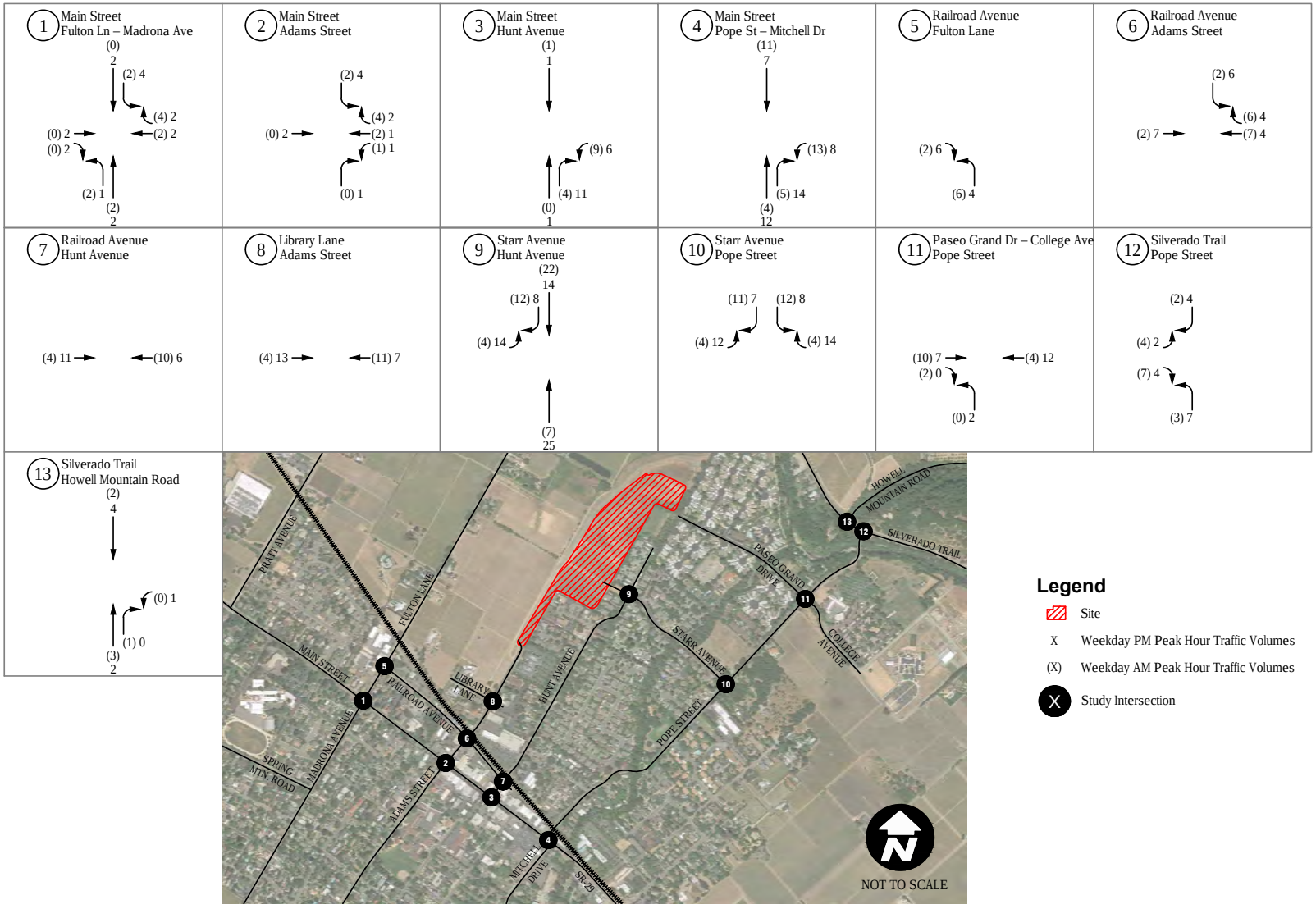

SOURCE: Google Maps 2017

FIGURE 3.14-7

Project Trip Distribution & Assignment - Total (All Uses)

Hunter Subdivision Project

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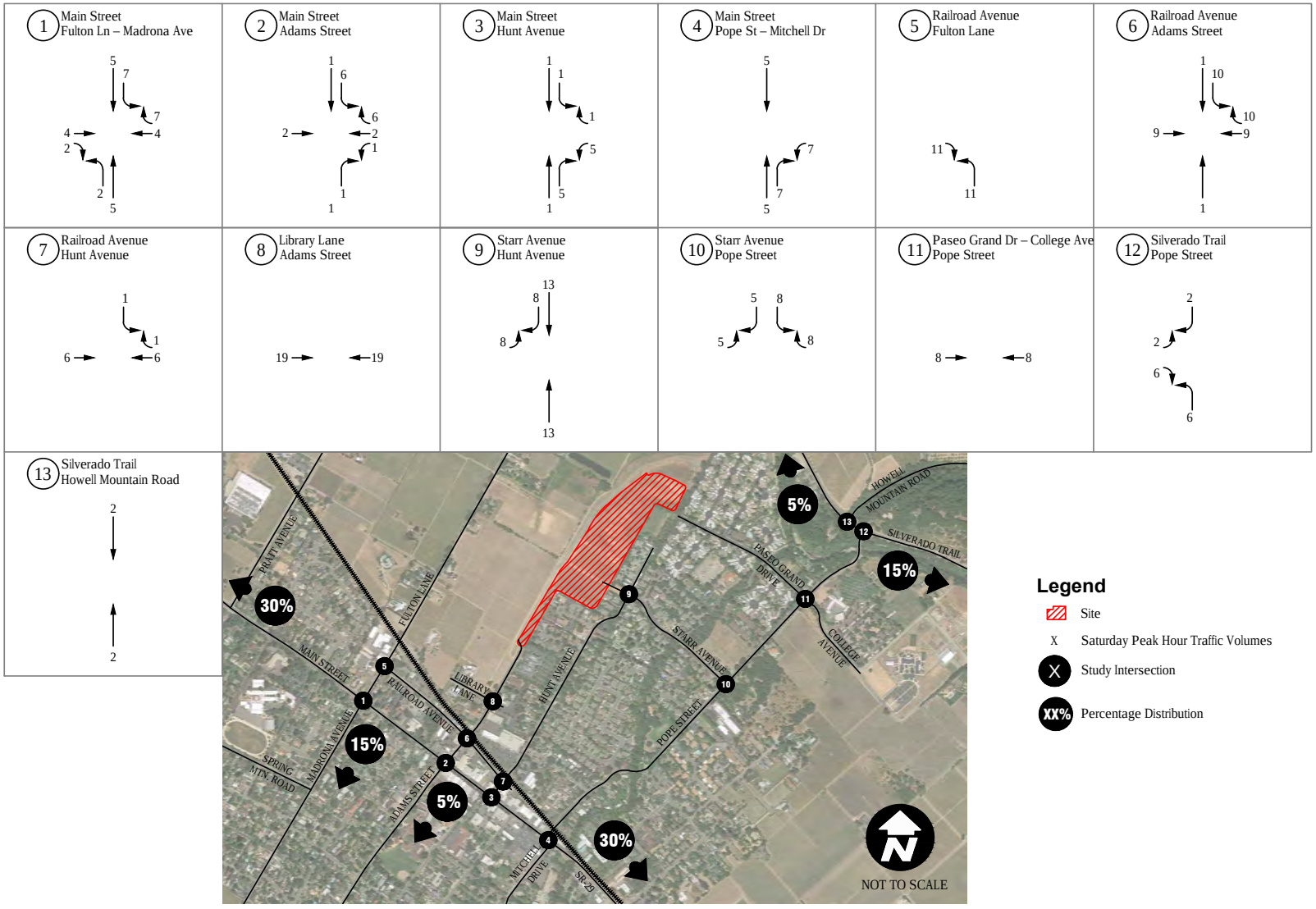

SOURCE: Google Maps 2017

FIGURE 3.14-8

Project Trip Distribution & Assignment - Saturday (All Uses)

Hunter Subdivision Project

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Since the City has not yet adopted VMT significance thresholds, the following significance threshold for residential projects provided in the OPR's Technical Advisory has been used for the Proposed Project:

- Residential: Exceed a level of 15% below existing VMT per capita, which may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the adopted SCS for that city and should be consistent with the SCS. The VMT analysis for the Proposed Project uses the Citywide VMT per capita as the significance threshold.

Impacts and Mitigation Measures

3.14-1: Would the Proposed Project conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? This impact would be less than significant.

As shown in the overview of applicable plans and policies under Section 3.14.3, the Proposed Project would be consistent with applicable plans, city ordinances or policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

As noted in the TIS (Appendix K), the Proposed Project would exceed the City's General Plan consistency criteria for evaluating LOS. However, as indicated above, under the current CEQA Guidelines, LOS, or vehicle delay, is no longer considered an environmental impact under CEQA, and VMT has been adopted as the most appropriate measure of transportation impacts. Improvement measures to address potential inconsistencies with General Plan policies are provided in the Proposed Project's TIS.

In addition, the TIS also addresses Policy CR1.1 and Action CR1.C included in the City's 2019 General Plan, and acts as the "Special Study" required to evaluate the new pedestrian and bicycle networks on the extension of Starr Avenue, north to Adams Street; and, the extension of Adams Street, east to Starr Avenue. A summary of the analysis of the Starr Avenue and Adams Street extensions are summarized below.

Transit, Pedestrian, and Bicycle

The NVTA manages Vine Transit, which provides transit service in the greater Napa County region and serves the Project site. The St. Helena Shuttle, Vine Route 10, and Vine Route 29 all provide differing levels of frequency and connectivity to transit riders. Access to these transit stops are a few blocks from the Project site and sidewalks are available to ensure safe pedestrian access. No transit stops would be included within the Project site.

In developed areas to the south/southeast sidewalks are present. As part of the Proposed Project, Adams Street and Starr Avenue would be extended to provide vehicle, bicycle and pedestrian access to the site, consistent with the 1993 General Plan Policy 5.8.1 and Policy CR1.1 from the City's 2019 General Plan. Sidewalks would be provided along both sides of the street allowing safe pedestrian access to the site from adjacent areas. Sidewalks are also available connecting the Project site to downtown St. Helena.

Class II bicycle lanes are available along the entirety of Starr Avenue and Silverado Trail and the majority of Pope Street from Railroad Avenue to Paseo Grand Drive-College Avenue. Class III bicycle routes are provided along Hunt Avenue and portions of Pope Street, east of Railroad Avenue and west of Paseo Grand Drive-College Avenue, towards the approach to the Pope Street Bridge. The extension of Starr Avenue and Adams Street would provide Class III bicycle access to the site and on roadways throughout the site.

The Project site would facilitate accessibility to downtown St. Helena by way of existing sidewalks that would provide access to several neighborhood services such as Main Street, retail and grocery stores, and the City's Public Library. As shown on the Bicycle Network of the City's 2019 General Plan, Napa Valley Vine Trail is proposed along Adams Street from Railroad Avenue to Starr Avenue and continues along Starr Avenue to Pope Street. The proposed Napa Valley Vine Trail would include Class I, Class II and Class III bicycle network segments.

The Proposed Project supports the NVTA's and Vine Transit's initiatives to foster local accessibility and adequate transit facilities for City residents. The Proposed Project would provide adequate sidewalks and bicycle amenities and would not conflict with any plans or policies supporting either the development of these facilities or the use of these facilities. The Proposed Project does conflict with any plans or policies that address transit, pedestrian and bicyclist facilities; therefore, impacts are **less than significant.**

Mitigation Measures

None required.

3.14-2: Would the Proposed Project conflict or be inconsistent with CEQA Guidelines Section 15064.3(b)? This impact would be potentially significant.

CEQA Guidelines Section 15064.3(b), focuses on newly adopted VMT criteria for determining the significance of transportation impacts.

As mentioned above, the Proposed Project is requesting approval of a Tentative Subdivision Map to subdivide the Project site into 51 single-family lots with 11 of the 51 lots developed with an ADU and a 3.4-acre lot designated for 25 multifamily units. As directed by the City, the average VMT/capita at the TAZ level was used for comparing the Proposed Project's VMT

relative to the Citywide VMT. The VMT maps available for Napa County from NSABM were used to determine the VMT/capita in the TAZ in which the Proposed Project is located.

Figure 3.14-9, VMT Screening Map, illustrates the VMT/capita estimate that was used in screening the Proposed Project. As shown in Figure 3.14-9, the Proposed Project is located is SNABM Zone 199. The VMT per capita of this zone is 11.37 per capita. The Proposed Project's VMT (Project TAZ VMT of 11.37) was compared with the City's 2015 baseline VMT per capita from the NSABM model (11.34 VMT per capita). As mentioned above, the City is using OPR's criteria indicating that a residential project that exceeds a level of 15% below existing VMT per capita would have a potentially significant transportation impact. As shown in the Table 3.14-3, the TAZ within which the Proposed Project is located has an existing VMT per capita of 11.37 which is above the Citywide VMT per capita of 11.34, as well as above the Citywide VMT per capita of 9.64. Therefore, the Proposed Project would exceed OPR's significance threshold of 15% less than the existing VMT resulting in a potentially significant impact.

Table 3.14-3
Proposed Project VMT Summary

Boundary/Threshold	VMT per capita
SNABM Zone 199 (Proposed Project TAZ)1	11.37
St. Helena (City)1	11.34
15% below Citywide Threshold2	9.64
Proposed Project TAZ VMT Above Threshold (greater than Citywide Threshold of 9.64)	Yes
Proposed Project VMT % Above Threshold3	15.2%

Notes:
1 VMT per capita value is from the VMT Tool for NSABM for 2015 Baseline conditions.
2 15% below Citywide VMT threshold of 11.34 = 9.64.
3 Increase calculated as 11.37-9.64 ÷ 11.37 = 0.152 or 15.2%.
Source: Dudek 2021.

Mitigation Measures

To mitigate the Proposed Project's impact related to VMT, the following Transportation Demand Management (TDM) strategies and Proposed Project design features were evaluated to determine feasibility for the Proposed Project. Based on the assessment of the potential TDM strategies it was determined implementation of these strategies would reduce the Proposed Project's VMT nominally (by approximately 2.0%). Therefore, as shown in Table 3.14-3, because the Proposed Project's VMT would be 15.2% higher than the Citywide VMT per capita under existing conditions a reduction of 2.0% would not reduce VMT to below the Citywide threshold of 9.64. Because there are no feasible mitigation measures available to substantially reduce or lessen the impact of the Proposed Project to less than significant, the impact is a **significant and unavoidable impact**.

Land Use Strategies

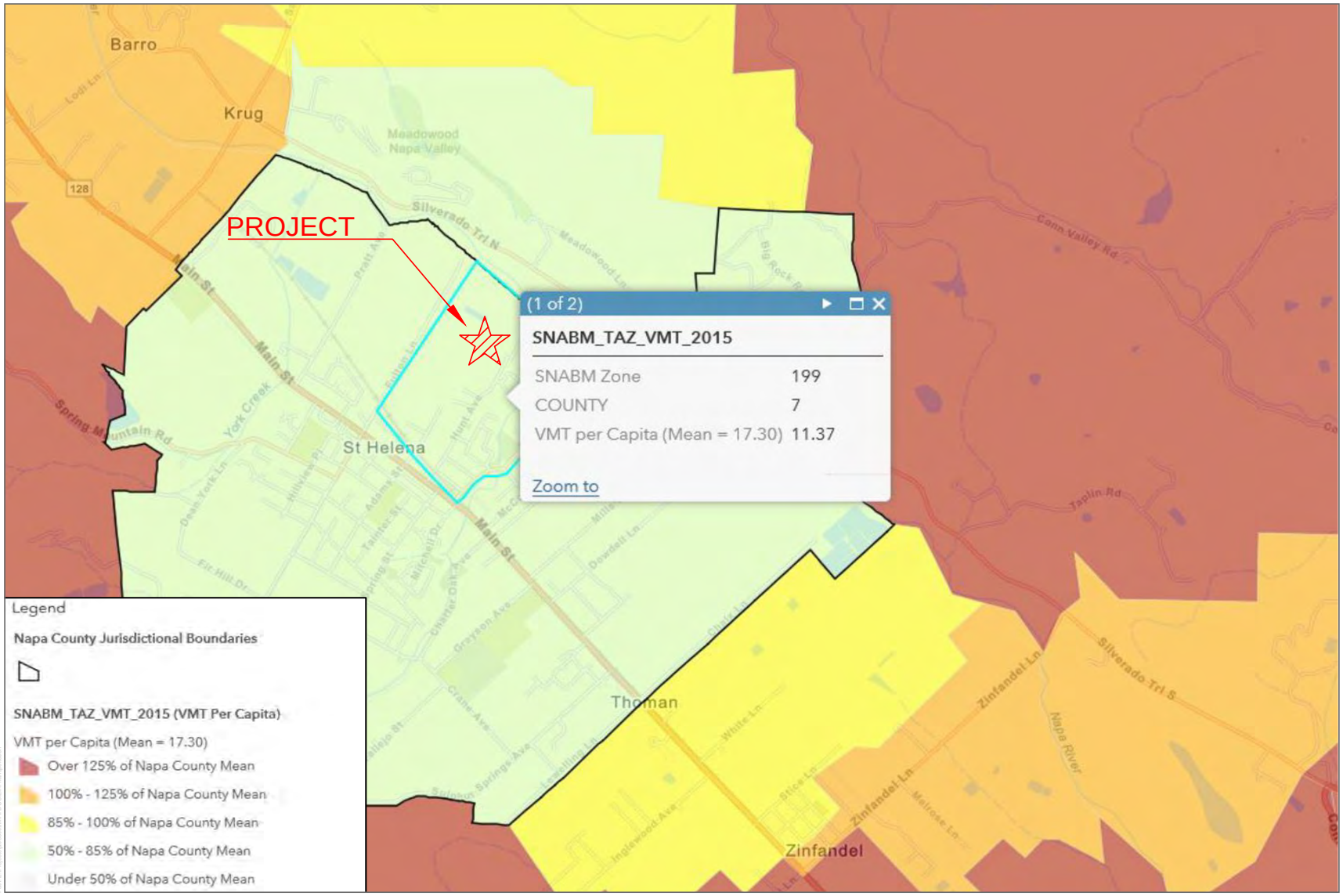
These land use strategies include land use diversity and supporting design features that encourage residents to walk, bike and/or use transit facilities and thereby reduce the total VMT. The Project site would facilitate accessibility to downtown St. Helena (i.e., approximately 0.7 miles from the Project site) by way of existing and new sidewalks that would provide access to downtown St. Helena including several neighborhood services along Main Street, such as retail and grocery stores, and to the St. Helena Public Library (located 0.1 miles from the Project site).

Due to the Proposed Project location, future residents could walk and bicycle to and from the town center. However, because the Proposed Project does not propose a mix of uses (i.e., retail or commercial) most of the Proposed Project's VMT would be to external (off-site) destinations and there would be no internal trip capture. Therefore, because the Proposed Project does not include a mix of uses a VMT reduction cannot be applied for any land use strategy.

Neighborhood /Site Design

- *Pedestrian Network/ Bicyclist Trail Network*

As mentioned under Section 3.14.2 Environmental Setting, pedestrian facilities are located near the Project site and Adams Street and Starr Avenue would be extended as part of the Proposed Project to provide vehicle, bicycle, and pedestrian access to the site. Sidewalks would be provided along both sides of Starr Avenue and Adams Street allowing safe pedestrian access to the site. The Project site would facilitate accessibility to downtown St. Helena by way of existing and proposed sidewalks that would provide access to several neighborhood services such as Main Street, retail and grocery stores, and the City's Public Library. Guidance for VMT reduction strategies is available in the document Quantifying Greenhouse Gas Mitigation Measures, August 2010 from the California Air pollution Control Officers Association (CAPCOA). CAPCOA estimates that for urban and suburban projects, providing a pedestrian network within the Project site that also connects to off-site pedestrian networks would reduce VMT by 2.0%. (CAPCOA SDT-1)



SOURCE: SNABM 2020

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FIGURE 3.14-9
VMT Screening Map
Hunter Subdivision Project

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Class II bicycle lanes are also available along the entirety of Starr Avenue and Silverado Trail and the majority of Pope Street from Railroad Avenue to Paseo Grand Drive-College Avenue. Class III bicycle routes are provided along Hunt Avenue and portions of Pope Street, east of Railroad Avenue and west of Paseo Grand Drive-College Avenue, towards the approach to the Pope Street Bridge. Along the Proposed Project access, Starr Avenue connects the site to the larger City bicycle network via Pope Street or Hunt Avenue. The City's Bicycle Plan was adopted in 2012 as part of the larger Napa County Transportation and Planning Agency's Bicycle Master Plan. The Napa Countywide Bicycle Plan was released in September 2019, however, has not yet been adopted by the City. This plan includes improvements such as Class III bicycle routes along Main Street, Railroad Avenue and Hunt Avenue and Class II bicycle path along Adams Street and Starr Avenue.

As shown on the Bicycle Network in the City's 2019 General Plan, Napa Valley Vine Trail is proposed along Adams Street from Railroad Avenue to Starr Avenue and continues along Starr Avenue to Pope Street. The proposed Napa Valley Vine Trail would include Class I, Class II and Class III bicycle network segments.

With the assumption that appropriate supportive features would be provided, a 2.0% VMT reduction per CAPCOA SDT-1 can be expected and applied to the Proposed Project as a result of connections to the existing and proposed pedestrian and bicyclist facilities.

Because the pedestrian and bicycling features contemplated in this strategy are (1) already part of the Project, (2) are already in existence or planned to be constructed by the City, or (3) are beyond the ability of the Proposed Project to implement, no mitigation to require these features is proposed.

Commute Trip Reduction and Travel Services

- *TDM Strategy Marketing for Residents*

"New resident" information packets could be distributed to all new residents to ensure that they are aware of all alternative transportation mode options available near the Proposed Project. The City could also post this information on the City's website so that this information is always accessible. Per CAPCOA standard TRT-7: Commute Trip Reduction Marketing, a VMT reduction percentage can be estimated for this measure, however based on the Proposed Project's size, it is likely to be less than 0.5%.

Because this measure would have a negligible effect on VMT, it is not proposed as a mitigation measure.

- *Bike-Share/Car-Share and Neighborhood Electric Vehicle Program*

Bike-share, car-share, car-pooling and neighborhood electric vehicle (NEV) programs reduce the need to have a car or second car. CAPCOA associates a VMT reduction with NEV participation and ownership, along with a travel network that accommodates NEV use, including features such as charging facilities, striping, signage, and educational tools (CAPCOA SDT-3). The VMT reductions are based on market penetration levels (i.e., percent of households with access to a NEV) and an average reduction in total VMT per NEV household of 12.7%. Since the number of NEV's per household cannot be estimated at this time and the city does not have an EV ride share program, no VMT reduction was assumed from this strategy.

Because no VMT reduction is projected to result from this strategy, it is not proposed as a mitigation measure.

- *Transit System Improvement Strategies*

  Network Expansion/Service Frequency/Speed Increase

This strategy would include coordination with the local transit operator (NVTA) to extend transit service to the Project site as well as increase service frequency. Increase in frequency by reducing transit headways, especially of the local shuttle service (St. Helena Shuttle), could potentially reduce the Proposed Project's VMT. According to the CAPCOA Report, transit network expansion and increasing transit service frequency results in VMT reductions ranging from 0.1-8.2% and 0.02-2.5%, respectively. Per the City's 2019 General Plan, only 1% of city residents commute by transit. Therefore, transit usage in the city is currently very low and cannot be assumed to provide a significant VMT reduction. Furthermore, the likelihood of an expansion of the transit network or increase in service frequency is not known at this time, therefore no VMT reduction was assumed from this strategy.

Because no VMT reduction is projected to result from this strategy, it is not proposed as a mitigation measure.

3.14-3: Would the Proposed Project increase hazards due to a geometric design feature or incompatible use? This impact would be less than significant.

Due to concerns raised in response to the NOP, the analysis below addresses potential safety hazards associated with Proposed Project access and design, including an overview of accident data. Potential hazards associated with construction activities is also provided.

Proposed Project Access and Circulation

As mentioned previously, the Proposed Project would extend Starr Avenue northward into the Project site, and intersect with Adams Street, which the Proposed Project would also extend eastward from its current terminus. As Starr Avenue is extended northward, it would narrow

from an approximately 75-foot right-of-way (ROW) to a 60-foot ROW with 4-foot-side sidewalks and a 6-foot-wide planter strip on both sides of the street, consistent with City's street standards. This extension, along with Adams Street, would be designed to accommodate emergency service vehicles and maintain accessibility for pedestrians and bicyclists according to City street design standards.

Additional, internal public residential streets within the Project site would be created to accommodate neighborhood circulation and provide on-street parking on both sides of the Starr Avenue and Adams Street extensions (where permitted). These roadways would be designed to be consistent with all applicable City street design criteria and conform to the City's Municipal Code (Section 16.32.060) to ensure that emergency service vehicles can adequately access and circulate within the Project site.

Based on a review of the proposed Tentative Subdivision Map, and field observations of existing on-street conditions around the site on Adams Street and Starr Avenue, there are no visual obstructions that would impede vehicles, bicyclists, and pedestrians from having safe access to and from the Project site.

As Adams Street is extended eastward and Starr Avenue is extended northward to link with Adams Street, the overall roadway geometrics would change. The intersection of Starr Avenue/Hunter Avenue would become a 4-way intersection, and vehicles would be able to access the Project site and unnamed internal roadways (Road A, Road B) within the Project site. The internal roadways would be used by Proposed Project residents, however the potential for Starr Avenue and Adams Street to be used as an alternative to Main Street/ SR 29 could also increase. Motorists could bypass the downtown area by traveling eastbound along Pope Street, northbound along Starr Avenue, westbound along Adams Street, northbound along Railroad Avenue, and finally eastbound along Fulton Lane to connect back to Main Street (the reverse applies for traffic travelling to the south of the region). Currently, motorists travel northbound along Starr Avenue and then westbound along Hunt Avenue before reaching Railroad Avenue. The expected increase in vehicles using these maneuvers would be higher along Adams Street and Starr Avenue, but lower along Hunt Avenue. However, the reopening of the Pratt Avenue connection between Main Street and Silverado Trail, as well as the future extension and connections identified in the 2019 General Plan would eliminate the need for such maneuvers other than under extreme circumstances.

Collision Analysis

A qualitative collision analysis was performed to disclose the collision history in the traffic study area. No incidences were reported near the Project site nor on roads the provide access to the Project site. Five years of collision data, from 2014 to 2018, was obtained from the California

Highway Patrol's (CHP) *Statewide Integrated Traffic Records System* (SWITRS). It is important to note that it may take up to six months for a collision to appear within the database, therefore data for 2018 may be incomplete.[11]

The SWITRS database is a public system that processes and collects data from CHP and other police agencies. The database was queried to select for all collisions occurring within the jurisdiction of the St. Helena Police Department (SHPD) and then narrowed down to the study area intersections that contained collisions resulting in pedestrian or bicyclist injury, as well as collisions occurring at intersections. Most "rear-end" type of collisions were not considered in this analysis since these types of collisions are considered to be by fault of the driver and not because of the intersection or roadway layout, or lack of signalization, as shown in Table 3.14-4. The SWITRS files are included in Appendix K.

Table 3.14-4
Collision Summary (2014-2018)

Nearest Study Intersection	# of Total Collisions	Total # of Injured[1]	Total # of Pedestrians Injured	Total # of Bicyclists Injured	Primary Cause
1. Main Street/Fulton Lane – Madrona Avenue	9	4	1	0	Ran light; improper turn
2. Main Street/Adams Street	4	3	3	0	Left turn/pedestrian crossing conflict
3. Main Street/Hunt Avenue	2	0	0	0	Left turn/pedestrian crossing conflict; improper turn
4. Main Street/Pope Street – Mitchell Drive	5	2	1	0	Unsafe speed
11. Paseo Grand Drive – College Avenue/Pope Street	1	0	0	0	Improper turn
12. Silverado Trail/Pope Street	15	12	0	0	Left turn and right-of-way conflicts
13. Silverado Trail/Howell Mountain Road	4	3	0	0	Improper turn

Notes: SWITRS Database Query conducted March 27, 2019.
[1] Consists of all injured parties (motorists, pedestrians, and bicyclists).
Source: SWITRS 2019.

As shown in Table 3.14-4, the total number of people injured within the 40 reported collisions is 24 people, 5 of which were pedestrians, and no bicyclists. The intersection of Silverado Trail/Pope Street had the highest number of total collisions recorded. These collisions may be

[11] Data from 2019 and 2020 was not available because the website was undergoing maintenance.

attributed to the narrowing of Pope Street at both approaches to the narrow Pope Street Bridge, creating slower moving traffic heading towards a higher speed roadway (Silverado Trail).

The Proposed Project would not increase hazards due to a geometric design feature or incompatible use that would contribute to an increase in collisions or create visual obstructions that would impede vehicles, bicyclists, and pedestrians from having safe access to and from the Project site. The impact is **less than significant.**

Construction

Construction activities presented in this section are based on construction assumptions included in Section 3.3, Air Quality. Construction traffic impacts would be temporary until buildout of the Proposed Project is completed. The build out scenario evaluated in the air quality analysis conservatively assumes buildout in 6 years.

Proposed Project construction activities have the potential to cause temporary traffic impacts on motorists. Traffic impacts from construction would be expected to occur as a result of the following conditions:

- Temporary increases in truck traffic associated with delivery of construction materials.
- Temporary increases in automobile traffic associated with construction workers traveling to and from the Project site.
- Temporary reductions in existing street capacity or on-street parking from temporary lane closures necessary for the construction of roadway improvements, utility relocation or extension, and drainage facilities.
- Temporary blockage of existing vehicle or pedestrian access to other parcels fronting streets.

For the purposes of this EIR, Proposed Project construction is expected to take 6 years, from site clearing and grading of the site to the end of building construction. Construction activity would occur on weekdays and may occasionally occur on Saturday. All heavy trucks would be required to comply with chapter 10.36 of the City's Municipal Code that establishes SR 29/Main Street as the primary truck route for heavy construction vehicles (exceeding a maximum gross limit of ten thousand (10,000) pounds). It is anticipated trucks would access the site using SR 29 connecting to Pope Street and Starr Avenue. All construction activities would be limited to Monday through Saturday from 8:00 AM to 5:00 PM, consistent with chapter 8.24 of the City's Municipal Code that allows construction activities to occur within these days and times.

Of the five construction phases (site preparation, grading, paving, building construction, and architectural coating), the building construction phase would generate the most traffic, related to

the number of construction workers destined to/from the site. For the 6-year buildout, building construction would generally last for seven months with one phase lasting 11 months.

It is estimated that the maximum number of construction personnel per day during the most intense phase (building construction) would be 20 workers. Assuming worst-case, non-carpooling among the workers, there would be a maximum of 40 construction worker trips per day (20 inbound and 20 outbound). The building construction phase would also require delivery of construction materials. It is estimated that an average of five delivery truck trips per weekday would occur, resulting in 10 daily truck trips (5 inbound and 5 outbound).

In general, the hours of construction typically require workers to be on-site before the weekday morning commuter peak period and allow them to leave before the afternoon commuter peak period (outside of the peak morning and evening commute times). Saturday construction activity would occur outside of the typical weekend midday peak period. Therefore, the large majority of construction-related trips would occur outside of the typical weekday commuter per periods and weekend midday peak period.

Parking for construction workers would be provided on-site. Therefore, construction workers and vehicles would not reduce the availability of parking spaces on streets surrounding the Project site. Also, no bus stops would be relocated and no bus lines would be rerouted due to Proposed Project construction.

Construction of the Proposed Project would be largely contained within the Project site and would generally not affect adjacent street access. In addition, any delays from additional construction traffic and/or construction activities at locations other than the streets adjacent to the Project site are not expected to be substantial. Certain construction activities such as roadway improvements and utility relocation or extension could require temporary lane closures, which would in turn temporarily reduce existing street capacity, but such impacts would be short-term in duration and would done through building and/or grading permits with the City.

Based on the temporary nature of traffic generated by construction workers and delivery trucks; the off-peak travel times of the construction workers; and, the requirement to obtain construction permits through the City along with preparation of a temporary traffic control plan for construction activities, to be approved by the City's traffic engineer (Municipal Code Section 12.12.050), construction traffic is not expected to create hazards for roadway travelers, pedestrians, bicyclists, or transit riders. The impacts of construction activity on the overall transportation system are anticipated to be temporary in nature and would cause minimal interruption to the regular operation of, the facilities surrounding the Project site. Impacts on traffic associated with construction (e.g., an intermittent reduction in street and intersection operating capacity) are typically considered short-term adverse impacts, but not significant.

Therefore, Proposed Project construction impacts on the transportation system would be **less than significant**.

Mitigation Measures

None required.

3.14-4: Would the Proposed Project result in inadequate emergency access? This impact would be less than significant.

The St. Helena Fire Department has reviewed the proposed Tentative Subdivision Map and has not identified any issues with inadequate emergency access.

Specifically, the Proposed Project includes two primary access points, Star Avenue and Adams Street as well as a separate emergency vehicle access. In the event of an emergency there would be three avenues that would enable vehicles to enter/exit the Project site. As described in Section 3.12, Public Services, the Proposed Project would be consistent with the 1993 General Plan Policy 8.5.7 and 2019 General Plan Policy PS4.6, which requires all streets and roads be designed with adequate width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide alternative emergency ingress and egress.

Once the Tentative Subdivision Map is approved, the Proposed Project's Final Subdivision Map would be subject to additional review by the St. Helena Fire Department to confirm proper access for fire and emergency response is provided and required fire suppression features are included.

Because adequate emergency access is provided the impact is considered **less than significant.**

Note: Wildfire risk and evacuation regulations are discussed in Section 3.8, Hazards and Hazardous Materials, and state the Proposed Project would not conflict with the Napa County Emergency operations Plan and adequate site access is available in the event of a wildfire.

Mitigation Measures

None required.

3.14.5 Cumulative Impacts

OPR's Technical Advisory provides guidance to practitioners regarding VMT analysis under cumulative conditions. Specifically, for projects analyzed using a VMT efficiency metric, the following statement is made: "A project that falls below an efficiency-based threshold that is aligned with the long-term environmental goals and relevant plans would have no cumulative

impacts distinct from the project impact. Accordingly, a finding of less-than-significant project impact would imply a less than significant cumulative impact, and vice versa".

Impacts related to inadequate emergency access and conflicts with transit, bicycle or pedestrian transportation would be identical to the impacts described in the Proposed Project impacts section; and all impacts would be less than significant.

Cumulative impacts are evaluated within the Cumulative plus Proposed Project framework which is based on the Buildout (2040) condition.

3.14-5: Under Cumulative conditions, would the Proposed Project conflict or be inconsistent with CEQA Guidelines section 15064.3(b)? This impact is considered potentially significant.

Based on the guidance provided by OPR and the VMT analysis above, since the Proposed Project would have a per capita VMT impact under the existing/base year, it would also have a **potentially significant cumulative impact** to VMT.

Mitigation Measures

Mitigation measures evaluated under Impact 3.14-3 would also apply under cumulative conditions; however, even with the inclusion of feasible TDM the Proposed Project's cumulative impact cannot be avoided or reduced to a less-than-significant level. No other feasible mitigation measures are available. Therefore, the Proposed Project's cumulative impact would be significant and unavoidable.

3.14.6 References

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3.15 ENERGY

This section evaluates the potential impacts that the proposed Hunter Subdivision Project (Proposed Project) may have on energy resources. This section presents the environmental and regulatory energy resource setting along with an analysis and discussion of energy resource impacts resulting from implementation of the Proposed Project.

No comments were received that raised concerns regarding energy resources in response to the Notice of Preparation. A copy of the Notice of Preparation and comments received is included in Appendix A.

Information contained in this section is based on Proposed Project plans and the California Emissions Estimator Model (CalEEMod) (used to estimate Proposed Project energy consumption). The analysis and findings are based on the emissions modeling, which can be found in Appendix C. Other sources consulted are listed in Section 3.15.6, References.

3.15.1 Environmental Setting

The environmental setting for the Proposed Project related to electricity, natural gas, and petroleum, including associated service providers, supply sources, and estimated consumption, is discussed as follows. In summary, in 2017 (the latest calendar year for which data is uniformly available for all three types of energy sources), California's estimated annual energy use included the following:

- Approximately 257,268 gigawatt hours of electricity (EIA 2019a)
- Approximately 2,110,829 million cubic feet (EIA 2019b)
- Approximately 16 billion gallons of gasoline (CEC 2018a)

Electricity

Electricity usage in California varies substantially by the types of uses in a building, types of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita has remained stable for more than 30 years, and the national average has steadily increased (CEC 2015a).

Two electricity service providers provide service to the City of St. Helena (City) and Napa County. The City joined the Marin Clean Energy (MCE), a community choice aggregation program. According to MCE's 2019 Integrated Resource Plan, approximately 89% of City residents purchase electricity through MCE (MCE 2019). MCE's 2019 peak demand forecast is approximately 1,048 million kilowatts and annual consumption is expected to be approximately 5,275 million kilowatt-

hours (kWh) (MCE 2019). The remaining 11% of customers within the City receive electricity from Pacific Gas & Electric Company (PG&E). PG&E provides electric services to 5.4 million customers, including 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines over a 70,000-square-mile service area that includes Northern California and central California (PG&E 2016). As presented in Table 3.15-1, according to PG&E, customers consumed 82,224 million kWh of electricity in 2017 (CEC 2018a).

Table 3.15-1
Pacific Gas & Electric Company 2017 Electricity Consumption

Sector	Total Electricity (in millions of kWh)
Agricultural and Water Pump	5,049.66
Commercial Buildings	30,446.89
Commercial Other	4,309.58
Industry	10,409.92
Mining and Construction	1,747.35
Residential	29,920.19
Streetlight	340.73
Total Consumption	82,224.32

Note: kWh = kilowatt-hour
Source: CEC 2018a.

PG&E receives electric power from a variety of sources. According to California Public Utilities Commission's (CPUC) 2018 Renewable Portfolio Standard (RPS) Annual Report to the Legislature, 33% of PG&E's power came from eligible renewable energy sources in 2017, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2018). In addition, MCE provides three options to customers including MCE Light Green service, in which 60% of the power mix would be generated by eligible renewable sources and the MCE Deep Green or the MCE Local Sol services, in which 100% of the power mix would come from renewable sources (CEC 2019).

Based on recent energy supply and demand projections in California, statewide annual peak electricity demand is projected to grow an average of 890 megawatts per year for the next decade, or 1.4% annually, and consumption per capita is expected to remain relatively constant at 7,200–7,800 kWh per person (CEC 2015a).

In Napa County, PG&E reported an annual electrical consumption of approximately 1,064 million kWh in 2017, with 685 million kWh for non-residential use and 380 million kWh for residential use (CEC 2018b).

Natural Gas

The CPUC regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from PG&E, Southern California Gas, San Diego Gas & Electric, Southwest Gas, and several smaller natural gas utilities. PG&E provides natural gas service to most of Northern California, including the City. As provided in Table 3.15-2, PG&E customers consumed approximately 4,715 million therms of natural gas, in 2017 (CEC 2018c).

Table 3.15-2
Pacific Gas & Electric Company 2017 Natural Gas Consumption

Sector	Total Natural Gas (in millions of therms)
Agricultural and Water Pump	36.40
Commercial Buildings	864.81
Commercial Other	67.96
Industry	1,701.34
Mining and Construction	170.82
Residential	1,873.36
Total Consumption	4,714.69

Source: CEC 2018c.

Natural gas is used for cooking, space heating, generating electricity, and as an alternative transportation fuel. The majority of California's natural gas customers are residential and small commercial customers (core customers). These customers accounted for approximately 30% of the natural gas delivered by California utilities in 2017. Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 70% of the natural gas delivered by California utilities in 2017 (EIA 2018b).

CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. California gas utilities may soon also begin receiving biogas into their pipeline systems (CPUC 2017).

In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California (CPUC 2017). Natural gas from out-of-state production basins is delivered into California through the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Southern Trails Pipeline, and Mojave Pipeline. The North Baja–Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers it through California into Mexico. The

Federal Energy Regulatory Commission regulates the transportation of natural gas on interstate pipelines, and CPUC often participates in Federal Energy Regulatory Commission regulatory proceedings to represent the interests of California natural gas consumers (CPUC 2017).

Most of the natural gas transported through interstate pipelines, as well as some California-produced natural gas, is delivered through the PG&E and Southern California Gas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the backbone pipeline system is then delivered into local transmission and distribution pipeline systems or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline system, and some core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. CPUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82% of the natural gas delivered to California's gas consumers in 2012 (CPUC 2017).

PG&E and Southern California Gas own and operate several natural gas storage fields located in Northern and Southern California. These storage fields and four independently owned storage utilities—Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage—help meet peak-season natural gas demands and allow California natural gas customers to secure natural gas supplies more efficiently (CPUC 2017).

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-1980s and is determined by market forces. However, CPUC decides whether California's utilities have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers (CPUC 2017).

In 2017 (the most recent year for which data is available), PG&E had delivered 39 millions of therms to Napa County, with the majority going to residential uses (21 millions of therms) (CEC 2018d).

Demand for natural gas can vary depending on factors such as weather, price of electricity, the health of the economy, environmental regulations, energy efficiency programs, and the availability of alternative renewable energy sources. As previously indicated, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available through existing delivery systems, thereby increasing the availability and reliability of resources.

Petroleum

There are more than 34 million registered vehicles in California, and those vehicles consume an estimated 16 billion gallons of fuel each year (CEC 2020; DMV 2019). Petroleum currently accounts for approximately 92% of California's transportation energy consumption (CEC 2020). However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled (VMT). Market forces have driven the price of petroleum products steadily upward over time, and technological advances have made use of other energy resources or alternative transportation modes increasingly feasible.

Largely as a result of and in response to these multiple factors, gasoline consumption within the state has declined in recent years, and availability of other alternative fuels/energy sources has increased. The quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend may likely continue and accelerate (CEC 2017). Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the state.

3.15.2 Regulatory Setting

Federal, state, and local agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the U.S. Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, CPUC and California Energy Commission (CEC) are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized as follows.

Federal Regulations

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 promoted the development of intermodal transportation systems to maximize mobility and address national and local interests in air quality and energy. ISTEA contained factors for metropolitan planning organizations to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, metropolitan planning organizations adopted policies defining the social, economic, energy, and environmental values guiding transportation decisions.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century was signed into law in 1998 and builds on the initiatives established in the ISTEA legislation (discussed above). The act authorizes highway, highway safety, transit, and other efficient surface transportation programs. The act continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of transportation decisions. The act also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of intelligent transportation systems to help improve operations and management of transportation systems and vehicle safety.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law. In addition to setting more stringent Corporate Average Fuel Economy standards for motor vehicles, the Energy Independence and Security Act includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

This federal legislation (the RFS) requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2013, 2015). The U.S. Environmental Protection Agency is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions in GHG emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program is referred to as "RFS2" and includes the following:

- Expands the RFS program to include diesel, in addition to gasoline
- Increases the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022
- Establishes new categories of renewable fuel, and sets separate volume requirements for each one
- Requires the U.S. Environmental Protection Agency to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces

Additional provisions of the Energy Independence and Security Act address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green" jobs.

State Regulations

The following discussion focuses primarily on those policies, regulations, and laws that directly pertain to energy-related resources. Also refer to Section 3.7, Greenhouse Gas Emissions, which addresses various policies, regulations, and laws targeted to the reduction of GHG emissions that are expected to achieve co-benefits in the form of reduced demand for energy-related resources and enhanced efficiencies in the consumption of energy-related resources.

Warren–Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974. The Warren–Alquist Act was created by the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.

- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided. The plan also identified policies, strategies, and actions that are cost effective and environmentally sound for California's consumers and taxpayers. In 2005, a second Energy Action Plan was adopted by the CEC and CPUC to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed as follows). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bill 1078 (2002)

Senate Bill (SB) 1078 established the California RPS Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill also required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

Senate Bills 107 (2006), X1-2 (2011), 350 (2015), and 100 (2018)

SB 107 accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December

31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% will come from renewables.

SB 350 requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024; 52% by December 31, 2027; and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60% RPS in 2030.

Assembly Bill 1007 (2005)

AB 1007 required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with the other state, federal, and local agencies. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focus on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (e.g., gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources.

Additional information on AB 32 and SB 32 is provided in Section 3.7 of this Environmental Impact Report.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards would further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards would use approximately 53% less energy than those under the 2016 standards (CEC 2018e). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018e).

State Vehicle Standards

In a response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009–2012 standards resulted in a reduction in approximately 22% GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 standards resulted in a reduction of approximately 30%.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles would emit 34% fewer global warming gases and 75% fewer smog-forming emissions (CARB 2011).

Although the focus of the state's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code, Section 65080, SB 375 requires metropolitan planning organizations to include a sustainable communities strategy in its regional transportation plan. The main focus of the sustainable communities strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also a part of a bigger effort to address other development issues within the general vicinity, including transit and VMT, which influence the consumption of petroleum-based fuels.

Regional Regulations

Association of Bay Area Governments

In July 2017, the Association of Bay Area Governments, the designated metropolitan planning organization for the San Francisco Bay Area region adopted the Plan Bay Area 2040 (ABAG 2017). The Plan Bay Area is a long-range plan for transportation projects within the planning area and focuses on cost-effective operational improvements to preserve the existing and expanded regional transportation system through 2040. The 2017 update to the Plan Bay Area focused on refinement of and addressing implementation challenges to the previous (2010) plan. The Plan Bay Area includes seven goals and 13 performance targets covering three broad areas: the environment, equity, and the economy. The performance targets are evaluated in several areas defined as key concerns, including climate protection, adequate housing, healthy and safe communities, open space and agricultural preservation, equitable access, economic vitality, and transportation system effectiveness.

Local Regulations

City of St. Helena 1993 General Plan

The City of St. Helena 1993 General Plan does not include any relevant policies related to energy conservation.

City of St. Helena 2019 General Plan[1] ("General Plan Update 2040")

The City of St. Helena 2019 General Plan includes policies related to energy conservation. Although the analysis is based on the 1993 General Plan, the following policies are included for informational purposes:

> **Policy CC2.1:** Encourage measures to reduce energy demand through conservation and efficiency.
>
> **Policy CC2.2**: Support local efforts to improve the energy supply by switching from fossil fuels to renewables.

3.15.3 Impacts

Methods of Analysis

Energy calculations from construction and operation of the Proposed Project were calculated using CalEEMod Version 2016.3.2. Details relevant to the modeling assumptions are described below.

Construction

Heavy-duty construction equipment of various types would be used during construction. A spreadsheet-based model consisting of data values presented in Appendix D of CalEEMod's User Guide and specific information provide by PG&E was used to estimate construction equipment usage; results are included in Appendix C of this Environmental Impact Report. Fuel use associated with truck deliveries and worker vehicle trips are also included in this analysis. Based on that analysis, diesel-fueled construction equipment would operate for an estimated 23,666 hours, as summarized in Table 3.15-3, Hours of Operation for Construction Equipment.

Table 3.15-3
Hours of Operation for Construction Equipment

Phase	Hours of Equipment Use
Site Preparation (2023)	560
Grading (2023)	1,280
Paving (2023)	960
Building Construction (2023-2028)	65,440
Architectural Coating (2023-2028)	672
Total	68,912

Source: See Appendix C for details.

[1] Also known as the "St Helena General Plan Update 2040," the 2019 General Plan is referred to in this EIR by its adoption date.

Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2020).

Operations

Operational energy calculations were estimated for buildout of the Proposed Project. The first full year of operation was assumed to be 2029, which is based on the completion of all construction activities.

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). The estimation of operational energy estimates (electricity and natural gas) were based on CalEEMod land use defaults and number of dwellings units. CalEEMod uses Residential Appliance Saturation Survey (RASS) datasets to obtain the energy intensities of different end use categories for different building types in different climate zones (CEC 2010).

Petroleum fuel consumption associated with motor vehicles traveling to and from the Project site is a function of VMT as a result of Proposed Project operation. As shown in Appendix C, the annual VMT attributable to the Proposed Project is expected to be approximately 1,605,342 VMT per year. Similar to construction worker and vendor trips, fuel consumption was estimated by converting the total CO_2 emissions from each land use type to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. The default fleet mix in CalEEMod for Napa County assumes that approximately 92.9% of vehicles are from light-duty to medium-duty vehicles and motorcycles were assumed to run on gasoline and the remaining 7.1% of vehicles represent medium-heavy duty to heavy-duty vehicles (delivery vehicles) and buses/recreational vehicles, which were assumed to run on diesel. Because CalEEMod calculates emissions from the transportation sector based on trip generation, the fleet mix assumes a disproportionately high number of medium-duty and heavy-duty trucks and bus trips. For example, of the 900 vehicle trips generated by the Proposed Project per day, the CalEEMod default would assume that approximately 64 trips per day are medium- and heavy-duty truck and bus trips, which is unrealistic for a residential project. Notably, CalEEMod calculates such a high number because the default fleet mix in is based on VMT and not vehicle trips and trucks travel approximately three to four times longer per trip than passenger vehicles.

Thresholds of Significance

Consistent with Appendix G of the California Environmental Quality Act Guidelines, a significant impact would occur if development of the Proposed Project would do any of the following:

- Result in the wasteful, inefficient or unnecessary consumption of energy resources during project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impacts and Mitigation Measures

3.15-1: Would the Proposed Project result in wasteful, inefficient or unnecessary consumption of energy resources during Project construction or operation? This impact would be less than significant.

Construction Energy Use

Electricity

The majority of the energy used during construction would be from petroleum. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and construction trailer(s) by managerial staff during the hours of construction activities. The electricity used for construction activities would be temporary and minimal; therefore, impacts would be **less than significant**.

Natural Gas

The need for natural gas is not anticipated during construction activities. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the following subsection, Petroleum. Any minor amounts of natural gas that may be consumed as a result of Proposed Project construction would be temporary and negligible and would not have an adverse effect; therefore, impacts would be **less than significant**.

Petroleum

Petroleum would be consumed throughout construction of the Proposed Project's infrastructure as well as residences. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities involved in grading and trenching for utilities would rely on diesel fuel. It is assumed construction workers would travel to and from the Project site in gasoline-powered vehicles.

The estimated diesel fuel use from construction equipment is shown in Table 3.15-4, Construction Equipment Diesel Demand.

Table 3.15-4
Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)[a]	kg CO_2/Gallon	Gallons
Site Preparation (2023)	7	16.73	10.21	1,638.13
Grading (2023)	8	26.06	10.21	2,552.46
Paving (2023)	6	20.03	10.21	1,961.49
Building Construction (2023-2028)	53	1,118.13	10.21	109,512.98
Architectural Coating (2023-2028)	6	12.54	10.21	1,400.40
			Total	117,065.46

Notes: CO_2 = carbon dioxide; kg = kilogram; MT = metric ton.
Sources: See Appendix C for details; The Climate Registry 2020.

Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled.

Calculations for total worker, vendor, and hauler fuel consumption are provided in Table 3.15-5, Construction Worker Vehicle Gasoline Demand, and Table 3.15-6, Construction Vendor Truck Diesel Demand.

Table 3.15-5
Construction Worker Vehicle Gasoline Demand

Phase	Trips	Vehicle CO_2 (MT)[a]	kg CO_2/Gallon[b]	Gallons
Site Preparation (2023)	180	0.55	8.78	62.57
Grading (2023)	400	1.22	8.78	139.04
Paving (2023)	300	0.92	8.78	104.28
Building Construction (2023-2028)	53,900	149.43	8.78	17,019.87
Architectural Coating (2023-2028)	1,232	3.38	8.78	385.34
			Total	17,711.12

Notes: CO_2 = carbon dioxide; kg = kilogram; MT = metric ton.
Sources: See Appendix C for details, The Climate Registry 2020.

Table 3.15-6
Construction Vendor Truck Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)[a]	kg CO_2/Gallon[b]	Gallons
Site Preparation (2023)	0	0.00	10.21	0.00
Grading (2023)	40	0.50	10.21	48.60
Paving (2023)	0	0.00	10.21	0.00
Building Construction (2023-2028)	10,780	131.97	10.21	12,925.25
Architectural Coating (2023-2028)	0	0.00	10.21	0.00
			Total	12,973.85

Notes: CO_2 = carbon dioxide; kg = kilogram; MT = metric ton; kV = kilovolt
Sources: See Appendix C for details, The Climate Registry 2020.

As shown in Tables 3.15-3 through 3.15-6, construction activities are estimated to consume approximately 147,750 gallons of petroleum during the construction phase. By comparison, approximately 89 billion gallons of petroleum would be consumed in California over the course of the Proposed Project's construction phase based on the California daily petroleum consumption estimate of approximately 78.6 million gallons per day (EIA 2019c). Thus, the total expected petroleum use from the Proposed Project's construction represents approximately 0.31% of California's consumption of petroleum over the construction duration. Notably, the Proposed Project would be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation: (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and (4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology requirements. Therefore, because the Proposed Project would not be unusual as compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state, Proposed Project construction would not result in wasteful, inefficient, or unnecessary consumption of petroleum and impacts would be **less than significant**.

Operational Energy Use

Electricity

At full build-out, the Proposed Project's operational phase would require electricity for operating the residences. CalEEMod default values for electricity consumption for each land use were applied (CAPCOA 2017). The electricity use for residential buildings is calculated in CalEEMod using energy intensity value (electricity use per square foot per year) assumptions, which were based on the RASS (CEC 2010).

The 2019 Title 24 standards were approved and adopted by the CEC in December 2018. The 2019 standards became effective on January 1, 2020. It was assumed that the Proposed Project would comply with the 2019 standards for the purposes of this evaluation; however, if the Proposed Project is approved whatever adopted standards are in place at the time would take precedence. Per the CEC Impact Analysis for the 2019 Update to the California Energy Efficiency Standards for Residential and Non-Residential Buildings, the first-year savings for newly constructed residential buildings, are 596 gigawatt hours of electricity, 50.4 megawatt of demand, and 0.4.42 million therms of gas, representing reductions from the 2016 Title 24 standard of 4%, 15%, and 5%, respectively.

Operational electricity use for the Proposed Project is presented in Table 3.15-7, Estimated Electrical Demand.

Table 3.15-7
Estimated Electrical Demand – Proposed Project Operation

Land Use Type[1]	Estimated Electrical Demand (kWh per year)
Accessory Dwelling Units	47,675.90
Single-Family Housing	411,955.00
Multifamily Units	126,011.00
Total	585,641.90

Notes:
[1] Land use type was taken from the CalEEMod modeling and represents the closest land use to what is in the Proposed Project.
kWh = kilowatt-hour
Source: See Appendix C for details.

As shown in Table 3.15-7, the Proposed Project is estimated to have a total electrical demand of approximately 585,642 kWh per year. By comparison, in 2017, PG&E supplied 82,224 million kWh of electricity to customers while MCE projects approximately 5,275 million kWh of electricity to be consumed (CEC 2018a; MCE 2019). Therefore, the Proposed Project would not result in a wasteful use of energy. Impacts related to operational electricity use would be **less than significant**.

Natural Gas

Natural gas would be directly consumed throughout operation of the Proposed Project, primarily through building heating and fireplace (only natural gas fireplaces are assumed) options for homes. As described above and consistent with electricity use, the Proposed Project's natural gas use was estimated using CalEEMod.

Table 3.15-8, Estimated Natural Gas Demand, shows the estimated natural gas use (therms per year) for Proposed Project operation.

Table 3.15-8
Estimated Natural Gas Demand – Project Operation

Land Use Type[1]	Estimated Natural Gas Demand (therms per year)
Accessory Dwelling Units	1,052.14
Single-Family Housing	13,633.90
Multi-Family Units	4,486.15
Total	19,172.19

Note:
[1] Land use type was taken from the CalEEMod modeling and represents the closest land use to what is in the Proposed Project.
Source: See Appendix C for details.

As presented in Table 3.15-8, the Proposed Project is estimated to use approximately 19,172 therms of natural gas per year. By comparison, in 2017, PG&E supplied 4,715 million therms of natural gas to customers (CEC 2018c). Therefore, natural gas consumption impacts would be **less than significant.**

Petroleum

The majority of fuel consumption resulting from the Proposed Project's operational phase would be attributable to the use of resident, visitor, and delivery motor vehicles traveling to and from the Project site, as well as fuels used for alternative modes of transportation that may be used by residents, visitors, and deliveries.

Calculations for annual mobile-source fuel consumption are provided in Table 3.15-9, Mobile Source Fuel Consumption – Operation.

Table 3.15-9
Mobile Source Fuel Consumption – Proposed Project Operation

Fuel	Vehicle MT CO_2	kg CO_2/Gallon	Gallons
Gasoline	510.16	8.78	58,104.81
Diesel	39.04	10.21	3,823.75
		Total	61,928.56

Notes: CO_2 = carbon dioxide; kg = kilogram; MT = metric ton.
Sources: See Appendix C for details (mobile source CO_2); The Climate Registry 2020 (kg/CO_2/gallon).

As shown in Table 3.15-8, mobile sources from Proposed Project operation would result in approximately 58,105 gallons of gasoline per year and 3,824 gallons of diesel consumed per year. By comparison, California as a whole consumed approximately 16 billion gallons of petroleum in 2017 (CEC 2018a).

Over the lifetime of the Proposed Project, the fuel efficiency of the vehicles being used by residents and visitors is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the Project site during operation would decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted an approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single, coordinated package of standards. The approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emissions vehicles in California (CARB 2013). Additionally, in response to SB 375, CARB adopted the goal of reducing per-capita GHG emissions from 2005 levels by 10% by 2020, and 19% by 2035 for light-duty passenger vehicles in the planning area for the Association of Bay Area Governments. As such, Proposed Project operation is expected to use decreasing amounts of petroleum over time due to advances in fuel economy.

In summary, although the Proposed Project would increase petroleum use during operation, the use would be a small fraction of the statewide use and due to efficiency increases, diminish over time. Given these considerations, petroleum consumption associated with the Proposed Project operation would not be considered inefficient or wasteful and impacts would be **less than significant**.

Mitigation Measures

None required.

3.15-2: Would the Proposed Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? This impact would be less than significant.

The Proposed Project is required to meet Title 24 and California Green Building Standards Code (CALGreen) standards to reduce energy demand and increase energy efficiency. According to the CEC, single-family homes built under the 2019 standards would use approximately 7% less energy than those built under the 2016 standards. The 2019 standards would also require the installation of rooftop solar for all new homes under three stories in height. With the inclusion of solar, homes would use approximately 53% less energy compared with the 2016 standards (CEC 2018e). In addition, the 2019 standards would include improvements to residential building's thermal envelope through high performance attics, walls and windows which will reduce energy consumption. Therefore, the Proposed Project would provide opportunities for improved energy efficiency that would support state and local plans for increasing renewable energy efficiency. For the reasons stated, the Proposed Project would not

conflict with or obstruct a state or local plan for renewable energy or energy efficient, and impacts would be **less than significant**.

Mitigation Measures

None required

3.15.4 Cumulative Impacts

The cumulative context for energy resources is development that would be allowed under the City's 1993 General Plan. Potential cumulative impacts on energy would result if the Proposed Project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction and/or operation.

3.15-3: Would the Proposed Project contribute to an increase in wasteful, inefficient or unnecessary consumption of energy resources during Project construction or operation? The Project's contribution would not be considerable.

Past, present, and future projects within the areas serviced by the energy service providers could cumulatively increase the use of energy resources. Projects that include development of large buildings or other structures that could have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact. Projects that would mostly include construction, such as transportation infrastructure, could also contribute to a cumulative impact; however, the impact of these projects would be limited because they would typically not involve substantial ongoing energy use. Other development projects within the region would result in incremental increases in long-term energy consumption similar to the Proposed Project through the introduction of new population to the region. Each of these projects, however, would be required to comply with local and state regulations for reducing energy consumption and increasing energy efficiency during operation. Nonetheless, the overall increase in demand for energy resources is a potentially significant cumulative impact.

Similar to the Proposed Project, cumulative projects would be subject to CALGreen or stricter local regulations which provides energy efficiency standards for commercial and residential buildings. CALGreen would implement increasingly stringent energy efficiency standards that would require the Proposed Project and the cumulative projects to minimize the wasteful and inefficient use of energy. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, further reducing the inefficient use of energy. Future development would also be required to meet even more stringent requirements, including the objectives set forth in the AB 32 Scoping Plan (CARB 2017), which would seek to make all

newly constructed residential homes zero net energy consumers by 2020, and all new commercial buildings Zero-Net-Energy consumers by 2030. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects.

In summary, with adherence to the increasingly stringent building and vehicle efficiency standards the Proposed Project would reduce energy consumption and would not contribute to a cumulative impact to the wasteful or inefficient use of energy. As such, the Proposed Project would not result in a cumulatively considerable contribution to a potentially significant cumulative impact and the Proposed Project's contribution is less than considerable resulting in a **less-than-significant cumulative impacts.**

Mitigation Measures

None required

3.15.5 References

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CHAPTER 4
CEQA CONSIDERATIONS

4.0 INTRODUCTION

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Environmental Impact Report (EIR) must also identify (1) significant environmental effects of the project, (2) significant environmental effects that cannot be avoided if the project is implemented, (3) significant irreversible environmental changes that would result from implementation of the project, (4) growth-inducing impacts of the project, and (5) alternatives to the project (evaluated in Chapter 5, Project Alternatives).

As noted throughout this EIR, the proposed Hunter Subdivision Project (Proposed Project) is requesting approval of a Tentative Subdivision Map. At this time the applicant is not requesting approval of entitlements that would enable development to proceed if the Proposed Project is approved. Subsequent discretionary actions and approvals would be required by the City of St. Helena (City) in order for development to be permitted.

4.1 SIGNIFICANT ENVIRONMENTAL EFFECTS

Chapter ES, Executive Summary, and Sections 3.1 through 3.15 of this Draft EIR provide a comprehensive identification of the Proposed Project's potentially significant environmental effects, including the level of significance both before and after mitigation.

4.2 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the Proposed Project on various aspects of the environment are discussed in detail in the technical sections contained in Chapter 3, Environmental Analysis, of this Draft EIR. There are two significant and unavoidable transportation impacts that cannot be avoided if the Proposed Project is approved as described in Section 3.14, Transportation and Circulation. The remainder of Proposed Project impacts can be mitigated to a less-than-significant level through the adoption of recommended mitigation measures or compliance with existing requirements or laws.

4.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL IMPACTS

Section 15126.2 (d) of the CEQA Guidelines requires a discussion of any significant irreversible environmental change that would be caused by a project. Generally, a project would result in significant irreversible changes if:

- The primary and secondary impacts would generally commit future generations to similar uses (such as highway improvement that provides access to a previously inaccessible area);
- The project would involve a large commitment of nonrenewable resources (CEQA Guidelines Section 15126.2(d));
- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project;
- The project would involve a large commitment of nonrenewable resources; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Implementation of the Proposed Project would result in the long-term commitment of resources of the Project site to urban land use. Future development of the Project site would likely result in or contribute to the following irreversible environmental changes:

- Conversion of undeveloped land currently partially used as a vineyard. Approximately 16.9 acres of undeveloped land would be converted to urban uses, thus precluding other alternate land uses in the future.
- Irreversible consumption of energy and natural resources associated with the future use of the site.

Development of the Proposed Project would result in the commitment of the Project site to urban development, thereby precluding other uses for the lifespan of the Proposed Project. Restoration of the site to pre-developed conditions would not be feasible given the degree of disturbance, the urbanization of the area, and the level of capital investment.

Resources that would be permanently and continually consumed by Proposed Project implementation include water, electricity, natural gas, and fossil fuels. Wood products, asphalt, and concrete would be used in construction along with gas and diesel fuel. With respect to operational activities, compliance with all applicable state and local building codes, as well as mitigation measures, planning policies, and standard conservation features, would ensure that resources are conserved to the maximum extent possible. The Proposed Project would

incorporate a number of sustainable practices that reduce the consumption of energy and water. Nonetheless, construction activities related to the Proposed Project would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline and diesel for automobiles and construction equipment.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by environmental accidents associated with the Proposed Project. While the Proposed Project would result in the use, transport, storage, and disposal of minor amounts of hazardous materials during Proposed Project construction and operation, as described in Section 3.8, Hazards and Hazardous Materials, all such activities would comply with applicable local, state and federal laws related to the use, storage and transport of hazardous materials, which significantly reduces the likelihood and severity of accidents that could result in irreversible environmental damage. The Proposed Project itself does not include any uniquely hazardous uses that would require any special handling or storage. Further, the Proposed Project does not contain any industrial uses that would use or store acutely hazardous materials.

Implementation of the Proposed Project would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts include the use of non-renewable and/or slowly renewable natural and energy resources, such as lumber and other forest products and water resources during construction activities. Operations associated with future uses would also consume natural gas and electricity. These irreversible impacts, which are unavoidable consequences of urban growth, are described in detail in the appropriate sections of this Draft EIR (see Chapter 3).

4.4 GROWTH-INDUCING IMPACTS

As required by Section 15126.2(e) of the CEQA Guidelines, an EIR must discuss ways in which a project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, the stimulation of economic activity within the region, or the establishment of policies or other precedents that directly or indirectly encourage additional growth. Under CEQA, this growth is not to be considered necessarily detrimental, beneficial, or of significant consequence. Induced growth would be considered a significant impact if it can be demonstrated that the potential growth, directly or indirectly, significantly affects the environment.

In general, a project could foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public

service, the provision of new access to an area, or a change in zoning or General Plan amendment approval), or economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion). These circumstances are further described below.

- **Elimination of Obstacles to Growth**: This refers to the extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity (e.g., constructing new roads or extending public utilities), or removes regulatory constraints that could result in growth unforeseen at the time of project approval.
- **Economic Effects**: This refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic effects can include such effects as the "multiplier effect." A "multiplier" is an economic term used to describe interrelationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the on-site employment and population growth of each project is not the complete picture of growth caused by the project.

Elimination of Obstacles to Growth

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing effect, though not necessarily a significant one. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth. Because the Project site is located within the City's Urban Limit Line and existing services are stubbed to the site, elimination of obstacles to growth is not a factor for this Proposed Project.

Removal of Infrastructure Limitations or Provision of Capacity

The elimination of physical obstacles to growth is considered a growth-inducing effect, although not necessarily a significant one.

The physical constraints to growth in the vicinity of the Project site include existing residential development to the south, southwest, west and southeast, which would preclude development immediately to the south, southwest, and southeast of the site, and existing office uses to the west, which would preclude inducing growth to the west of the site. Utility infrastructure is also stubbed to the site so no off-site connections would be required. The connection to existing City

infrastructure to serve the Project site would not induce growth in this area. Due to the location of the Project site within the City's Urban Limit Line and access to utilities, the Proposed Project would not eliminate any constraints that are currently obstacles to growth in this portion of the City that would hasten development of this area.

The City's Residential Growth Management System is no longer enforceable due to the passage of SB 330 (see Gov't Code sec. 66300) otherwise known as the Housing Crisis Act of 2019. This act prevents cities from establishing or implementing any provision that imposes a limit on the number of housing units that can be approved or constructed annually or for some other period. Therefore, the City can no longer limit residential growth to approximately two percent per year (no more than nine building permits for market rate housing could be issued each year), while providing for both market rate and affordable housing units (Municipal Code Chapter 17.152).

Economic Effects

Implementation of the Proposed Project would affect the local economy through the construction of new residences that would require construction workers during the short-term and would encourage people to either relocate or move to the City to take advantage of proximity to local shops, restaurants, and other amenities in nearby downtown.

Additional local employment can be generated through the multiplier effect, as discussed previously in this chapter. The multiplier effect tends to be greater in regions with larger, diverse economies due to a decrease in the requirement to import goods and services from outside the region.

Two different types of additional employment are tracked through the multiplier effect. *Indirect* employment includes those additional jobs that are generated through the expenditure patterns of direct employment associated with the Proposed Project. Indirect jobs tend to be in relatively close proximity to the places of employment and residence.

The multiplier effect also calculates *induced* employment. Induced employment follows the economic effect beyond the expenditures of the residents within a project area to include jobs created by the stream of goods and services necessary to support residences within the Project site. When a manufacturer buys or sells products, the employment associated with those inputs or outputs are considered *induced* employment.

For example, when an employee of the Proposed Project goes out to lunch, the person who serves the employee lunch holds a job that is *indirectly* related to the Proposed Project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered *induced* employment.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees and residents who support the employees of the Proposed Project.

Increased future employment generated by employee spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this physical space and its specific location that will determine the type and magnitude of environmental impacts of this additional economic activity. Although the economic effect can be predicted, the actual environmental implications of this type of economic growth are too speculative to predict or evaluate, since they can be spread throughout the City, Napa County, and beyond.

Impacts of Induced Growth

The growth induced directly and indirectly by the Proposed Project could contribute to the environmental impacts, discussed in Chapter 3, in the City and the County, as well as the greater regional area. Any such environmental effects, however, are too diffuse and speculative to predict or describe with any particularity.

Indirect and induced population growth in the City would further contribute to the loss of open space because it would encourage the conversion of undeveloped land to urban uses for additional housing and infrastructure. However, it is assumed this new growth would occur within areas of the City designated and zoned for development or planned for potential future urban development. The City has designated areas for future development in order to protect areas of active agriculture, also within the incorporated City but outside of the Urban Limit Line. Again, however, the particular open space that might get converted cannot be predicted with any certainty, all such conversions to urban land use would occur within areas planned for growth designated in the City's General Plan. Development of the property to the north of the Project site is outside of the City's Urban Limit Line and would require a general plan amendment and compliance with CEQA to evaluate potential impacts.

In summary, although the Proposed Project can be said to induce growth, the consequences of such growth-inducement are too speculative to meaningfully predict and, furthermore, due to the designation of the Project site for future residential development in the City's 1993 General Plan and 2019 General Plan[1], implementation of the Proposed Project would not be considered growth inducing. Growth-inducing effects are therefore considered **less than significant.**

[1] Also known as the "St Helena General Plan Update 2040," the 2019 is referred to in this EIR by the year of its adoption.

4.5 ENERGY USAGE

Measures intended to reduce unnecessary or inefficient use of resources or energy consumption are incorporated into the Title 24 and CALGreen standards, which the Proposed Project would be required to comply with. Implementation of the Proposed Project would result in the commitment of limited, renewable resources such as lumber and water. In addition, development allowed under both the 1993 General Plan and the 2019 General Plan would irretrievably commit nonrenewable resources for the construction and maintenance of buildings, infrastructure, and roadways. These non-renewable resources include mined materials such as sand, gravel, steel, copper, and other metals. The City recognized that buildout of the General Plan also represents a long-term commitment to the consumption of fossil fuels, natural gas, diesel and gasoline. Increased energy demands would be used for construction, lighting, heating, and cooling of residences, and transportation of people within, to, and from the Project site. The Proposed Project's energy requirements are analyzed in Section 3.15 of this Draft EIR. The analysis determined that the Proposed Project's use of energy resources, including electricity, natural gas, and petroleum, would not be wasteful, inefficient or unnecessary during Proposed Project construction or operation. Please see Section 3.15, Energy, for more information on energy demands of the Proposed Project.

4.6 CUMULATIVE IMPACTS

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the Proposed Project. This assessment involves examining Proposed-Project-related effects on the environment in the context of similar effects that have been caused by past or existing projects, and the anticipated effects of future projects. As indicated in the CEQA Guidelines, the discussion of cumulative impacts need not provide the same level of detail as Proposed-Project-related impacts. The discussion should be guided by "standards of practicality and reasonableness" (CEQA Guidelines, Section 15130(b)). Although project-related impacts can be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, could be significant under CEQA and must be addressed (14 CCR Section 15130(a)). Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable probable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself).

Cumulative Context

To ensure an adequate discussion of cumulative impacts is included in an EIR, CEQA allows the lead agency to use either a list of past, present, and probable future projects (including

those projects outside of the control of the lead agency), or projections included in an adopted local, regional, or statewide plan like a general plan (CEQA Guidelines, Section 15130(b)(1)). The general cumulative impact context for evaluating cumulative impacts for the majority of the technical issue areas evaluated in Chapter 3 of this Draft EIR considers buildout of the City's 1993 General Plan because this General Plan was in effect when the Proposed Project application was deemed complete in September 2011, or evaluates the potential loss of resources on a much broader, regional scale. The cumulative impact analyses in this Draft EIR thus do not rely on any list of specific pending, or reasonably foreseeable development proposals in the general vicinity of the Project site or within the City. The City updated the General Plan in 2019. However, since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project. Nonetheless, this EIR also evaluates consistency with the 2019 General Plan for informational purposes and the cumulative analysis will note any changes, if relevant between buildout assumptions under the 1993 General Plan as compared to the 2019 General Plan.

It is important to note that the basis of the cumulative analysis varies by technical area. For example, traffic and traffic-related air emissions and noise analyses assume development that is planned and/or anticipated in the City, as well as the surrounding unincorporated area, because each contributes to traffic on local and regional roadways that is quantifiable. Operational air quality impacts are evaluated against conditions in the City and surrounding areas within the San Francisco Bay Area Air Basin. The technical sections in Chapter 3 evaluate the Proposed Project's cumulative impacts at the end of the impact analysis. The cumulative analysis in each of the technical sections evaluates the Proposed Project's contribution to the cumulative scenario to determine if the Proposed Project's contribution to an existing significant cumulative impact would be considerable resulting in an impact. A description of the cumulative context for each issue area evaluated is included in the cumulative impacts at the end of each technical section of Chapter 3.

CHAPTER 5
PROJECT ALTERNATIVES

5.0 INTRODUCTION

The purpose of the alternatives evaluation in an Environmental Impact Report (EIR), as stated in Section 15126.6(c) of the California Environmental Quality Act (CEQA) Guidelines, is to ensure that "[t]he range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects" identified under the proposed project. Pursuant to CEQA Guidelines, Section 15126.6, alternatives to the proposed Hunter Subdivision Project (Proposed Project) are presented in this Draft EIR to provide the public, public agencies and decision makers with a range of possible alternatives to the Proposed Project to consider. The CEQA Guidelines state that an EIR shall describe a *reasonable* range of alternatives that would avoid or substantially lessen any significant effects of the project but need not consider every conceivable alternative. The CEQA Guidelines further state that "the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly" (CEQA Guidelines, Section 15126.6(b)). Therefore, an EIR must describe a range of reasonable alternatives to the proposed project (or to its location) that could feasibly attain most of the basic objectives of the project. The feasibility of an alternative may be determined based on a variety of factors, including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control (CEQA Guidelines, Section 15126.6(f)(1)).

Alternatives in an EIR must be potentially feasible (CEQA Guidelines, Section 15126.6(a)). Agency decision makers ultimately decide what is "actually feasible." (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal. App. 4th 957, 981 (*CNPS*).) Under CEQA, "feasible" is defined as capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (CEQA Guidelines, Section 15364). The concept of "feasibility" also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project. (*Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1506-1509; *CNPS*, *supra*, 177 Cal. App. 4th at p. 1001; *In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165, 1166.) Moreover, "'feasibility' under CEQA encompasses 'desirability' to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors." (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410, 417.)

An EIR need not evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project. The alternatives discussion is intended to focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives as listed in Chapter 2, Project Description, and in this chapter of this Draft EIR.

The lead agency's decision-making body, in this case the St. Helena City Council, has the discretion to select a Proposed Project alternative in lieu of the Proposed Project. If this were to occur, the City Council would need to ensure that the level of detail included in the alternatives analysis is adequate and that there would not be any new or significant impacts as a result of selecting the alternative. The required Findings of Fact and Mitigation Monitoring Plan (MMP) would need to be prepared that identifies the alternative as the project selected for approval. It is anticipated that if one of the Proposed Project alternatives is selected, the mitigation measures identified for the Proposed Project would not change and would still be required and, depending on the alternative selected, may require additional mitigation measures where impacts are more severe than the Proposed Project.

This chapter identifies the Proposed Project objectives, describes the Proposed Project alternatives, and evaluates the comparative effects of the alternatives relative to the Proposed Project. As required under Section 15126.6(e) of the CEQA Guidelines, the environmentally superior alternative is identified and included at the end of this chapter.

Significant and Unavoidable Impacts

The Proposed Project would result in the following significant and unavoidable transportation impacts. There is no feasible mitigation available to reduce these impacts to less than significant.

- The Proposed Project would generate an increase in project-specific vehicle miles traveled (VMT) that would exceed the Office of Planning and Research's (OPRs) threshold of 15% below that of existing development.
- Under cumulative conditions the Proposed Project would generate an increase in VMT that would exceed the threshold.

Project Objectives

Pursuant to CEQA Guidelines, Section 15124(b), a clear statement of project objectives is required. The Proposed Project includes the following project objectives:

- Subdivide the site consistent with the City's General Plan and Zoning for the site to accommodate residential development.
- Provide opportunities to develop a variety of housing types, including multi-family, single-family, and accessory dwelling units, affordable to a range of incomes including, very low, low and moderate-income households.
- Provide opportunities to contribute to the provision of workforce and affordable housing consistent with the City's adopted Housing Element and the Regional Housing Needs Assessment (RHNA) approved by the Association of Bay Area Governments (ABAG).
- Minimize traffic-related environmental impacts, such as noise, air quality and greenhouse gases by lowering commute patterns for St. Helena workers by providing more local housing opportunities.
- Support alternative transportation by providing a pedestrian and bicycle linkages through St. Helena, eventually connecting the regional Vine Trail from Calistoga to the Vallejo Ferry.
- Exceed the City's green building ordinance (Municipal Code Chapter 15.53) and incorporate sustainable design features including water conservation measures, drought resistant landscaping with low flow watering systems, south and west side tree placement to reduce reliance on air conditioning units, and pre-wiring for photovoltaic systems.
- Implement the General Plan Circulation Element by completing the planned extension of Starr Avenue and the partial planned extension of Adams Street from where Adams Street terminates to connect to the Project site.
- Minimize City water use by continuing the use of an existing on-site water well for irrigation of Project landscaped areas.

Alternatives Considered but Dismissed from Further Consideration

As noted previously, the purpose of an alternatives analysis is to develop alternatives to the Proposed Project that substantially lessen at least one of the significant environmental effects identified as a result of the Project, while still meeting most, if not all, of the basic Proposed Project objectives. Proposed Project alternatives that would lessen the severity of some of the impacts identified under the Proposed Project are addressed later in this chapter.

One of the requirements for an alternatives analysis that is set forth in the CEQA Guidelines is identification of alternatives that were considered by the lead agency but rejected as infeasible

during the scoping process. As stated in Section 15126.6(c) of the CEQA Guidelines, the EIR should briefly explain the reasons underlying this determination. Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are:

(i) Failure to meet most of the basic project objectives,

(ii) Infeasibility, or

(iii) Inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6(c))

Section 15126.6(f)(1) of the CEQA Guidelines states that, "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)." However, as stated in this subsection, no single factor establishes a fixed limit on the scope of reasonable alternatives.

An alternate site or off-site alternative was determined to be infeasible for the Proposed Project because the Project applicant owns the Project site and it would not be feasible to acquire, control or otherwise have access to a new property within the City large enough to accommodate the Proposed Project. Therefore, an off-site or alternate Proposed Project location was dismissed from further evaluation.

A reduced density alternative was considered but dismissed because it does not avoid or reduce any potentially significant impacts and would not avoid any health and safety concerns required for the City to make findings under Section 15041 of the CEQA Guidelines and Government Code Section 65589.5(j).

Lastly, a mixed-use alternative that includes commercial uses in addition to residential was also considered and dismissed because it would not be consistent with the underlying land use designation and zoning and would require a General Plan Amendment and rezone. Therefore, this alternative was considered but ultimately dismissed from further review.

5.1 ALTERNATIVES CONSIDERED IN THIS EIR

This section provides a description of the alternatives to the Proposed Project analyzed in this Draft EIR and evaluates how specific impacts differ in severity from those associated with the Proposed Project. For purposes of this analysis, the potentially significant impacts identified under the alternatives analysis are assumed to be fully mitigated through compliance with mitigation measures identified in the Executive Summary chapter in Table ES-1 and in Sections

3.1 through 3.15 included in Chapter 3, which contains the environmental analysis of the Proposed Project.

The Proposed Project alternatives identified herein address the significant construction-related and operational impacts (before mitigation) identified for the Proposed Project including aesthetics/visual resources, biological resources, cultural resources, geology and soils, noise and vibration, and traffic and circulation. Thus, the alternatives developed for the Proposed Project contemplate a change in land uses to address these impacts. In many instances, the impacts are virtually identical to the Proposed Project and are described as such.

This Draft EIR has incorporated a reasonable range of Proposed Project alternatives that, collectively, attain a majority of the Proposed Project objectives in a reasonable manner while reducing the severity of the significant impacts (before mitigation) identified under the Proposed Project.

CEQA Guidelines Section 15126.6(e) requires that an EIR include an alternative that describes what would reasonably be expected to occur on the property in the foreseeable future if the Proposed Project were not approved, based on current plans and consistent with available infrastructure and community services (i.e., "No Project" alternative). For projects other than a land use plan (for example, a development project on an identifiable property), the "No Project" alternative is considered to be a circumstance under which the project does not proceed. (CEQA Guidelines Section 15126.6(e)(3)(A-B)). "If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed. … [W]here failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment." Because the Proposed Project is on land that is designated and zoned for housing, it would be artificial to assume that the Project site's existing physical environment would be preserved by rejection of the Proposed Project. Therefore, this EIR includes two "No Project" alternative analyses: (1) the scenario where the Project does not proceed and the Project site remains in its existing undeveloped condition is evaluated as the "No Project/No Development Alternative," and (2) the potential scenario where the Project site is used and developed in accordance with the City's existing land use plans (2019 General Plan) is evaluated as the "No Project/General Plan Alternative."

The alternatives to the Proposed Project analyzed in this Draft EIR are as follows:

- Alternative 1: No Project/No Development
- Alternative 2: No Project/General Plan

- Alternative 3: Park/Open Space Preserve
- Alternative 4: Increased Density/Affordable Housing

Alternative 1: No Project/No Development Alternative

Description

The No Project/No Development Alternative considers the effects of forgoing the Project entirely and leaving the Project site in its current undeveloped condition. Under the No Project/No Development Alternative, the Proposed Project would not be approved or constructed. Under this alternative, the Project site would retain its current land use designation and zoning consistent with both the 1993 General Plan and the City's current 2019 General Plan. The No Project/No Development Alternative allows decision-makers to compare the impacts of the Proposed Project to retaining the existing condition of the site. The No Project/No Development Alternative describes the environmental conditions that exist at the time that the environmental analysis commenced (CEQA Guidelines, Section 15126.6 (e)(2)).

This alternative would not meet the City's General Plan policies or Project objectives, or state policies of promoting development of new housing, including affordable housing. For policy reasons, and because the No Project/No Development Alternative would fail to meet any of the basic objectives of the Project or of the City's General Plan, this alternative could be rejected in favor of the Proposed Project.

Comparative Analysis of Environmental Effects

The No Project/No Development Alternative would produce no changes on the Project site, because the site would remain in its current undeveloped condition, effectively eliminating the Project impacts discussed in this Draft EIR.

There would be no change to visual conditions at the site, so no mitigation would be required related to spillover light. There would be no air emissions associated with Project construction and operation and there would be no increase of any emissions, including ozone, $PM_{2.5}$, or $PM_{10,}$ which are designated nonattainment in the San Francisco Bay Area Air Basin (SFBAAB), that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions. There would be no increase in greenhouse gases (GHG), energy, or demand for public service or utilities. There would be no land disturbance so there would be no impacts to biological, cultural, or geological resources, or any impacts related to hazardous materials, so no mitigation would be required. Additionally, there would be no changes in ambient noise levels associated with Project construction and operation.

Lastly, there would be no increase in the number of vehicles accessing the site and on area roadways and intersections. Thus, there would be no impact associated with the Project's increase in VMT.

Ability to Meet Proposed Project Objectives

The No Project/No Development Alternative would not achieve any of the Project objectives because development would not occur.

Alternative 2: No Project/General Plan Alternative

Description

Under this alternative, it is assumed the Project would be developed consistent with the underlying MDR land use designation and MR zoning which allows development of the Project site with residential uses up to a maximum density of 12 dwelling units/acre (du/ac) under the 1993 General Plan MDR designation which was revised to 16 du/ac under the 2019 General Plan consistent with the MR zoning, which permits a maximum density of 16 du/ac. For the purposes of this alternative a density of 9 du/ac was assumed for a total of 152 single-family residential units. Based on the number of units this alternative would result in a population of 372 residents, an increase of 159 residents as compared to the Project. It is assumed Starr Avenue and Adams Street would both be extended to connect to the Project site and the street and lot layout would be very similar to the Project with the exception of the 3.4-acre portion of the site currently designated for multifamily units (Lot 52). This portion of the Project site would be configured to accommodate single-family residences.

Comparative Analysis of Environmental Effects

Due to the denser development and increased number of residential units, it is anticipated that impacts associated with air quality, greenhouse gases, energy, public utilities, population and housing, and noise would be increased. It is anticipated the same mitigation measures for impacts to nesting birds and bats (biological) and the potential to unearth any previously unknown historic, archeological, or paleontological resource (cultural, geology and soils), potential soil contamination from agricultural chemical residues (hazards), and noise from construction equipment would be still be required. The potential impacts are compared below.

Impacts Identified as Being the Same or Similar to the Proposed Project

Under this alternative, impacts to the loss of agricultural land would remain less than significant, the same as the Proposed Project because the entire site would be developed. There would be

an increase in lights, the same as the Proposed Project, so mitigation would be required to address spillover light (AES-1).

Biological impacts related to special-status species, riparian habitat, sensitive natural communities, migratory wildlife corridors, wildlife nursery sites, tree preservation policies, and any other conservation plans would remain the same as the Proposed Project. This alternative would still require implementation of Mitigation Measures BIO-1 through BIO-3 to minimize impacts to bats and nesting birds and erosion impacts. This alternative would also still require development over the existing seasonal wetlands in order to accommodate single-family development. Thus, impacts to the seasonal wetlands would total 0.7 acres, the same as the Proposed Project.

Cultural and geological impacts would be similar to the Proposed Project. Ground disturbance would be performed in the same development area and mitigation would still be required to ensure that any historical, archaeological, and paleontological impacts are less than significant (Mitigation Measures CUL-1 and GEO-2). A design-level geotechnical report would also be required, per Mitigation Measure GEO-1 to ensure the homes are constructed consistent with any site-specific grading or foundation recommendations.

Because this alternative would still involve disturbance of site soils, soils testing for agricultural chemicals of concern would still be required as a condition of approval for construction and grading permits. Mitigation would still be required (Mitigation Measure HAZ-1) to ensure potential impacts would be less than significant.

It is assumed Starr Avenue and Adams Street would both be extended to connect to the Project site and the street and lot layout would be very similar to the Proposed Project with the exception of the 3.4-acre portion of the site currently designated for multifamily units. Internal roadways would be similar and still be designed consistent with all applicable City street design criteria and impacts would remain less than significant.

Impacts Identified as Being Less Severe than the Proposed Project

No impacts were identified as being less severe than the Proposed Project.

Impacts Identified as Being More Severe than the Proposed Project

The No Project/General Plan Alternative would include 152 single-family residential units and no multifamily units. This alternative would result in a population of 372 residents, an increase of 159 residents as compared to the Proposed Project. While air quality impacts would be slightly more severe, they would still be less than significant and would not require any mitigation. This would be the same for greenhouse gas emissions impacts and energy impacts.

Noise from construction equipment would be greater from the Proposed Project due to the increased amount of development and the nature of construction of single-family residences. Construction equipment would still need to be equipped with suitable exhaust and intake silencers, and stationary construction equipment would need to be located away from adjacent residential property boundaries as is practical, in accordance with Mitigation Measure NOI-1. This would ensure that noise impacts related to construction would still be less than significant. Noise impacts from operation as well as vehicle trips would also be slightly greater but would not be substantial enough to constitute significant impacts.

The increase in 159 residents would also increase the demand for water supply, wastewater conveyance and treatment, schools, and solid waste disposal. However, the increase in severity would not be great enough to constitute significant impacts. These impacts are described in further detail below.

For the Proposed Project, the water demand for single-family residences assumes eight persons per home, based on the City's demand factor of four bedrooms and two persons per bedroom for the market rate homes and two bedrooms for the affordable housing units, based on the Preliminary Water Calculations prepared for the Proposed Project (see Appendix J). The projected residential water demand for this alternative is shown in Table 5-1 below. With the City's demand factor assumption of eight occupants per single-family residence, the water demand calculation assumes this alternative would result in a total anticipated water demand of approximately 47.6 acre-feet (AF) per year. Water demand is expected to increase, but the same as the Proposed Project any development is required to offset its increase in water in compliance with the City's Water Neutral Ordinance. The same as the Proposed Project, all units would be designed to include efficient and lower-water-using fixtures and appliances and irrigation systems consistent with Green Building Standards Code (CAL Green Code) that requires the installation of water-efficient indoor infrastructure to conserve water. The landscape irrigation demand under this alternative would comply with the City's Model Water Efficient Landscape Ordinance (MWELO) as well. In addition, irrigation of public landscaping would be offset through planting of drought tolerant plants, water conservation measures, and use of the on-site well, the same as the Proposed Project.

Table 5-1
Alternative 2: No Project/General Plan Alternative Residential Water Demand

Fixture	Flow Rate gal/min or gal/flush	Flow Duration (min., flush, load, etc)	Daily Uses per Occupant	Number of Occupants[1]	Gallons per Day	Acre-feet Per Year
Showerheads	2	8	1	1,216	19,456	21.79
Sink Faucets	1.5	0.25	3	1,216	1,368	1.53
Kitchen Faucet	1.5	4	1	1,216	7,296	8.17
Toilet	1.3	1	3	1,216	4,742.4	5.31

Table 5-1
Alternative 2: No Project/General Plan Alternative Residential Water Demand

Fixture	Flow Rate gal/min or gal/flush	Flow Duration (min., flush, load, etc)	Daily Uses per Occupant	Number of Occupants[1]	Gallons per Day	Acre-feet Per Year
Clothes Washer	19.7	1	0.37	1,216	8,863.424	9.93
Dish Washer	6.3	1	0.1	1,216	766.08	0.86
				Total Water Demand	42,491.9	47.59

Note:
[1] For the purposes of determining the Proposed Project's water demand, the City's demand factor is based on the number of bedrooms and persons per bedroom, which differs from the City's persons per household (PPH) to determine the number of residents a residential project would generate, which is 2.45 PPH.
Source: Appendix J.

The water demand of 47.6 AF per year would also translate to 47.6 AF per year of wastewater demand, also expected to be higher than the Proposed Project but would not require mitigation.

This alternative is also expected to result in a slight increase in solid waste generation (see Table 5-2). The solid waste generation rates used for the Proposed Project are based on the U.S. Environmental Protection Agency (EPA) estimate of 0.0033 tons/day/dwelling unit for multi-family residential homes. This would result in a solid waste generation estimate of 0.234 tons per day, 0.277 tons greater than the Proposed Project's estimate. However, the amount of solid waste generated during operation would still be much less than the unused daily capacity of the Clover Flat landfill (425 tons per day), and therefore would not exceed the capacity of the landfill. The impact would remain less than significant and would not require mitigation.

Table 5-2
Alternative 2: No Project/No Action Alternative Projected Solid Waste Generation

Land Use	Generation Rate (tons/day/unit)	Waste Disposed (tons per day)
152 Single-family Residential Units	0.0033	0.502
	Total	0.502

Source: CalRecycle 2018.

Table 5-3 considers the increase in school-age children attending primary, elementary, middle and high schools. Student generation rates were derived from the SHUSD Facility Master Plan, which outlines expected growth in demand for school facilities associated with projected development and plans how to fund and respond to such growth. This alternative is expected to generate approximately 35 students in total, an increase of 7 students compared to the Proposed Project. This increase would not exceed the current capacity of schools within the SHUSD, and development under this alternative would still be required to pay the necessary school impact fees.

Table 5-3
Alternative 2: No Project/No Action Alternative Student Generation

Grades	Student Generation Rate (per total number of units)	Students Generated
K-2	0.058	8.816
3-5	0.080	12.16
6-8	0.088	13.38
9-12	0.088	15.84
	Total	57

Source: SHUSD 2010.

Because of the increased number of residential units, the Project's VMT would be greater than the Proposed Project and the impact would remain significant and unavoidable.

Ability to Meet Proposed Project Objectives

The No Project/General Plan Alternative would develop the site consistent with the underlying land use designation and zoning assuming ag a density of 9 du/ac and would complete the planned extensions of Adams Street and Starr Avenue. However, this alternative would not achieve the Proposed Project objective of developing a variety of housing types, including multifamily housing and ADUs. Housing would be less affordable to a range of incomes since development would be limited to single-family homes. This alternative would not minimize traffic-related environmental impacts due to the increase in units and residents. Overall, this alternative would not meet most of the Proposed Project objectives.

Alternative 3: Park/Open Space Preserve Alternative

Description

The Park Preserve/Open Space Alternative includes an approximately 1-acre park/open space that would preserve a majority of the on-site wetlands to help lessen impacts to seasonal wetlands (Impact 3.4-2), as shown on Figure 5-1, Park Preserve Alternative. To accommodate the park three lots would need to be removed (Lots 44, 45, 46) and vegetated swales to capture runoff would be located adjacent to developed areas. It is anticipated the park would be landscaped with native plants and may include a small tot lot or be left as passive open space. The remaining approximately 16-acres would be developed with approximately the same number of residential units as the Proposed Project and would maintain a density of 5.1 du/ac. The single-family lots would be slightly smaller than the Proposed Project and there could be an increase in the number of multifamily units. Site access and internal roads would essentially be the same as the Proposed Project. The same number of residents, 213, is conservatively assumed under this alternative, the same as the Proposed Project.

Comparative Analysis of Environmental Effects

Disturbance to the Project site to accommodate development would be slightly less as compared to the Proposed Project. Even though this alternative would result in a slightly smaller development footprint, it is anticipated construction-related impacts associated with potential impacts to biological, cultural, geological resources, hazardous materials, and noise would essentially remain the same as the Proposed Project, less-than-significant with mitigation. It is anticipated the same mitigation measures for impacts to nesting birds (biological) and the potential to unearth any previously unknown historic, archeological, or paleontological resource (cultural, geology and soils), and potential soil contamination from agricultural chemical residues (hazards) would be still be required. While there would still be impacts to two seasonal wetlands (0.006 of an acre), this alternative would minimize impacts to the 0.065 acre of seasonal wetlands at the site. The potential impacts are compared below.

Impacts Identified as Being the Same or Similar to the Proposed Project

The change in visual quality would be the same as the Proposed Project and the impact would remain less than significant. There would be an increase in lights, the same as the Proposed Project, so mitigation would be required to address spillover light (AES-1). Under this alternative, impacts to the loss of agricultural land would also remain less than significant.

Biological impacts related to special-status species, riparian habitat, sensitive natural communities, migratory wildlife corridors, wildlife nursery sites, tree preservation policies, and any other conservation plans would remain the same as the Proposed Project. This alternative would still require implementation of Mitigation Measures BIO-1 through BIO-3 to minimize impacts to bats and nesting birds and erosion impacts. Impacts related to jurisdictional wetlands are described further below, under “Impacts Identified as Being Less Severe than the Proposed Project.”

Cultural and geological impacts would be similar to the Proposed Project. The extent of ground-disturbance would be similar, albeit slightly less, and mitigation would still be required to ensure that any historical, archaeological, and paleontological impacts are less than significant (Mitigation Measures CUL-1 and GEO-2). A design-level geotechnical report would also be required, per Mitigation Measure GEO-1 to ensure the homes are constructed consistent with any site-specific grading or foundation recommendations.

Because this alternative would still involve disturbance of site soils, soils testing for agricultural chemicals of concern would still be required as a condition of approval for construction and grading permits. Mitigation would still be required (Mitigation Measure HAZ-1) to ensure potential impacts would be less than significant.

Noise from construction equipment would likely be similar to the Proposed Project. Construction equipment would still need to be equipped with suitable exhaust and intake silencers, and stationary construction equipment would need to be located away from adjacent residential property boundaries as is practical, in accordance with Mitigation Measure NOI-1. This would ensure that noise impacts would still be less than significant.

Under this alternative, impacts associated with air and GHG emissions due to construction and operation and increase in demand for public services, utilities and energy would remain less than significant, the same as the Proposed Project.

The potable water and landscape irrigation demand under this alternative would be very similar to the Proposed Project and would comply with the City's MWELO and Water Neutrality Ordinance and would be required to off-set the increase in water demand. Water and wastewater impacts would be less than significant, the same as the Proposed Project.

Because the same number of units would be developed the impact to VMT would remain the same as the Proposed Project, significant and unavoidable. Internal roadways would remain the same and still be designed consistent with all applicable City street design criteria and impacts would remain less than significant.

Impacts Identified as Being Less Severe than the Proposed Project

The Project site currently supports four seasonal wetlands for 0.07 acre and two agricultural ditches, as shown on Figure 3.4-2 in Section 3.4, Biological Resources. These features are anticipated to meet the criteria for jurisdictional waters of the United States.

With implementation of this alternative, the impact to seasonal wetlands would be less severe than the Proposed Project. The Park Preserve/Open Space Alternative includes an approximately 1-acre park that would preserve two of the larger wetland features to help reduce Impact 3.4-2. The area of impacted wetlands would be reduced to .006 acres rather than 0.07 acres from the Proposed Project. In order to ensure viability of the wetlands, vegetated swales would be located between the park and any developed uses. The swales would capture runoff from adjacent developed areas in order to maintain the water quality of the wetlands.

Impacts Identified as Being More Severe than the Proposed Project

No impacts were identified as being more severe than the Proposed Project.

Relationship to Proposed Project Objectives

The Park Preserve/Open Space Alternative would still manage to achieve all stated Proposed Project objectives. The main changes from this alternative would be a small decrease in the residential footprint and the avoidance of seasonal wetlands at the Project site. This alternative

would still subdivide the site consistent with the underlying land use designation and zoning, complete the planned extensions of Adams Street and Starr Avenue, provide a variety of housing types, including affordable housing, and provide more local housing opportunities.

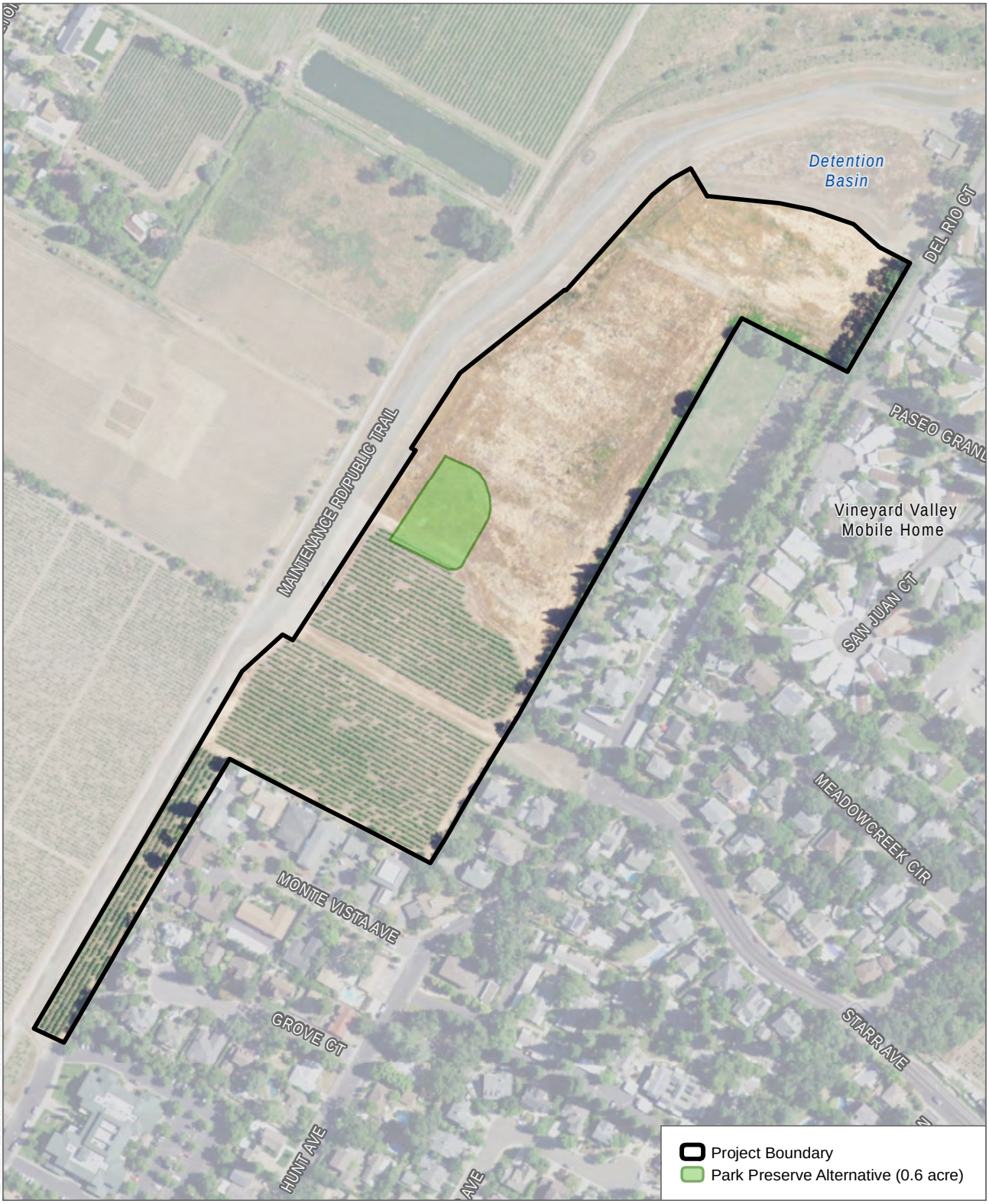
Alternative 4: Increased Density/Affordable Housing Alternative

Description

The Increased Density/Affordable Housing Alternative includes the approximately 1-acre park to preserve a majority of the on-site seasonal wetlands with the remaining approximately 16-acres designated for up to 180 affordable housing units, assuming a density of 11.3 dwelling units per acre (du/ac) under the existing Medium Density Residential (MDR) land use designation (current zoning allows for a maximum density of 16.0 du/ac). The units would be attached housing (duplex or triplex) and would be 100% affordable. It is assumed buildings would be no taller than 30-feet, consistent with the underlying MR zoning. Under the technical guidance issued by the Office of Planning and Research, a 100% affordable housing project is exempt from the requirement to calculate VMT. Site access and internal roads would essentially be the same as the Proposed Project. Using the City's persons per household factor of 2.45 people per unit for medium/higher density residential land uses this alternative would generate 441 residents, an increase of 194 residents as compared to the Proposed Project.

Comparative Analysis of Environmental Effects

The Proposed Project includes a Tentative Subdivision Map to create 51 market-rate single-family residences (with ADUs on 11 of these lots) and 25 attached multifamily units. The Increased Density/Affordable Housing Alternative would increase the density from 5.1 du/ac to a density of 11.3 du/ac. All units would be attached housing (duplex or triplex) and would be 100% affordable. Due to the increase in residents, it is anticipated the increase in air pollutants and GHG emissions associated with operation would be slightly higher than the Proposed Project due to the increase in vehicle trips, as well as the demand for water supply, wastewater conveyance and treatment, schools, solid waste disposal, and energy. Construction and footprint-related impacts associated with biological, cultural, and geological resources, hazardous materials, and noise would essentially be the same as the Proposed Project, as these impacts would be less-than-significant with mitigation. It is anticipated the same mitigation measures for impacts to bats, and nesting birds (biological) and the potential to unearth any previously unknown historic, archeological, or paleontological resource (cultural, geology and soils), and potential soil contamination from agricultural chemical residues (hazards) would be still be required. This alternative would minimize impacts to on-site seasonal wetlands with inclusion of the 1-acre park, similar to the Park Preserve/Open Space Alternative. The potential impacts are compared below.



SOURCE: USDA 2016, USGS 2018, Napa County 2015

DUDEK

0 125 250 Feet

FIGURE 5-1

Park Preserve Alternative

Hunter Subdivision Project

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Impacts Identified as Being the Same or Similar to the Proposed Project

Under this alternative, impacts to the loss of agricultural land would remain less than significant, the same as the Proposed Project. The change in visual quality would be greater than the Proposed Project but essentially the impact would remain less than significant. The increase in lighting associated with development would also be the same as the Proposed Project and would require mitigation (AES-1).

Biological impacts related to special-status species, riparian habitat, sensitive natural communities, migratory wildlife corridors, wildlife nursery sites, tree preservation policies, and any other conservation plans would remain the same as the Proposed Project. This alternative would still require implementation of Mitigation Measures BIO-1 through BIO-3 to minimize impacts to bats and nesting birds and erosion impacts. Impacts related to jurisdictional wetlands are described further below, under “Impacts Identified as Being Less Severe than the Proposed Project.”

Cultural and geological impacts would be similar to the Proposed Project. While the extent of ground disturbance may differ due to construction of more duplex/triplex housing essentially the same area of disturbance would occur and mitigation would still be required to ensure that any historical, archaeological, and paleontological impacts are less than significant (Mitigation Measures CUL-1 and GEO-2). A design-level geotechnical report would also be required, per Mitigation Measure GEO-1 to ensure the homes are constructed consistent with any site-specific grading or foundation recommendations.

Under this alternative, the Project would still be required to perform soils testing for agricultural chemicals of concern as a condition of approval for construction and grading permits for the Project site. Mitigation would still be required (Mitigation Measure HAZ-1) to ensure potential impacts would be less than significant.

Impacts Identified as Being Less Severe than the Proposed Project

The impact to jurisdictional wetlands under this alternative would be less severe than the Proposed Project. This alternative would include an approximately 1-acre park, as described in the Park Preserve/Open Space Alternative that would preserve a majority of the on-site wetlands to help reduce Impact 3.4-2. The area of impacted wetlands would be 0.006 of an acre rather than 0.07 acre under the Proposed Project.

Because affordable housing projects are not required to evaluate VMT, there would be no impact to an increase in VMT eliminating the significant and unavoidable Project impact.

Impacts Identified as Being More Severe than the Proposed Project

Under this alternative the density would increase from 5.1 du/ac under the Proposed Project to 11.3.0 du/ac. As discussed above, this alternative would generate 441 residents, an increase of 228 residents as compared to the Proposed Project.

Due to the increase in residents, it is anticipated the increase in air pollutants associated with operation would be slightly higher than the Proposed Project due to the increase in vehicle trips and emissions from the increased number of residents. While air quality impacts would be slightly more severe, they would still be less than significant and would not require any mitigation. This would be the same for greenhouse gas emissions impacts and energy impacts. While the severity of impacts would slightly increase, they would still remain less than significant and would not require mitigation to address.

Noise from construction equipment would be greater from the Proposed Project due to the nature of construction of single-family residences versus attached duplex/triplex housing. Construction equipment would still need to be equipped with suitable exhaust and intake silencers, and stationary construction equipment would need to be located away from adjacent residential property boundaries as is practical, in accordance with Mitigation Measure NOI-1. This would ensure that noise impacts related to construction would still be less than significant. Noise impacts from operation as well as vehicle trips would also be slightly greater but would not be substantial enough to constitute significant impacts.

The increase in 228 residents would also increase the demand for water supply, wastewater conveyance and treatment, schools, and solid waste disposal. However, the increase in severity would not be great enough to constitute significant impacts. These impacts are described in further detail below.

For the Proposed Project, the water demand for single family residences assumes eight (8) persons per home, based on the City's demand factor of four bedrooms and two persons per bedroom for the market rate homes and two bedrooms for the affordable housing units, based on the Preliminary Water Calculations prepared for the Project (see Appendix J). The projected residential water demand for this alternative is shown in Table 5-4 below. The water demand calculation for this alternative assumes the 180 attached duplex and triplex units would be equally divided between 2-bedroom, 3-bedroom, and 4-bedroom units. With the City's demand factor assumption of two occupants per bedroom, the water demand calculation assumes this alternative would result in a total anticipated water demand of approximately 42.3 acre-feet (AF) per year. Water demand is expected to increase, but the same as the Proposed Project any development is required to offset its increase in water in compliance with the City's Water Neutral Ordinance. The same as the Proposed Project, all units would be designed to include

efficient and lower-water-using fixtures and appliances and irrigation systems consistent with Green Building Standards Code (CAL Green Code) that requires the installation of water-efficient indoor infrastructure to conserve water. The landscape irrigation demand under this alternative would comply with the City's Model Water Efficient Landscape Ordinance and possibly may be lower than the Proposed Project's irrigation demand because there would be no private lawns. In addition, irrigation of public landscaping would be offset through planting of drought tolerant plants, water conservation measures, and use of the on-site well, the same as the Proposed Project.

Table 5-4
Alternative 4: Increased Density/Affordable Housing Alternative
Residential Water Demand

Fixture	Flow Rate gal/min or gal/flush	Flow Duration (min., flush, load, etc)	Daily Uses per Occupant	Number of Occupants[1]	Gallons per Day	Acre-feet Per Year
Showerheads	2	8	1	1,080	17,280	19.37
Sink Faucets	1.5	0.25	3	1,080	1,215	1.36
Kitchen Faucet	1.5	4	1	1,080	6,480	7.26
Toilet	1.3	1	3	1,080	4,212	4.72
Clothes Washer	19.7	1	0.37	1,080	7,872.12	8.82
Dish Washer	6.3	1	0.1	1,080	680.4	0.76
				Total Water Demand	37,739.52	42.3

Note:
[1] For the purposes of determining the Proposed Project's water demand, the City's demand factor is based on the number of bedrooms and persons per bedroom, which differs from the City's persons per household (PPH) to determine the number of residents a residential project would generate, which is 2.45 PPH.
Source: Appendix J.

The water demand of 42.3 AF per year would also translate to 42.3 AF per year of wastewater demand, also expected to be higher than the Proposed Project but would not require mitigation.

This alternative is also expected to result in a slight increase in solid waste generation. The solid waste generation rates used for the Proposed Project are based on the U.S. Environmental Protection Agency (EPA) estimate of 0.0013 tons/day/dwelling unit for multi-family residential homes. This would result in a solid waste generation estimate of 0.234 tons per day, only 0.001 tons greater than the Proposed Project's estimate, as shown in Table 5-5. The impact would remain less than significant and would not require mitigation.

Table 5-5
Alternative 4: Increased Density/Affordable Housing Alternative
Projected Solid Waste Generation

Land Use	Generation Rate (tons/day/unit)	Waste Disposed (tons per day)
180 Multi-family Residential (Duplex/Triplex) Units	0.0013	0.234
	Total	0.234

Source: CalRecycle 2018.

Table 5-6 considers the increase in school-age students for primary, elementary, middle and high schools. Student generation rates were derived from the SHUSD Facility Master Plan, which outlines expected growth in demand for school facilities associated with projected development and plans how to fund and respond to such growth. This alternative is expected to generate approximately 57 students in total, an increase of 29 students compared to the Proposed Project. This increase would not exceed the current capacity of schools within the SHUSD, and this alternative would still be required to pay the necessary school impact fees.

Table 5-6
Alternative 4: Increased Density/Affordable Housing Alternative Student Generation

Grades	Student Generation Rate (per total number of units)	Students Generated
K-2	0.058	10.44
3-5	0.080	14.4
6-8	0.088	15.84
9-12	0.088	15.84
	Total	57

Source: SHUSD 2010.

Relationship to Proposed Project Objectives

The Increased Density/Affordable Housing Alternative would subdivide the site consistent with the underlying land use designation and zoning, would complete the planned extensions of Adams Street and Starr Avenue, and would contribute to the provision of workforce and affordable housing objective. However, this alternative would not achieve the Proposed Project objective of developing a variety of housing types, including single-family and ADUs. The housing would be affordable to a range of incomes including, very low, low and moderate-income households, but would not include any single-family or market rate homes. This alternative generally meets a majority of the Proposed Project objectives but not all of the objectives.

5.2 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Project/No Development alternative is the environmentally superior alternative. It would avoid all Project-related environmental impacts. CEQA Guidelines Section 15126.6(e)(3)(A) requires that when the No Project alternative is environmentally superior, another alternative be selected as the environmentally superior alternative. The environmentally superior alternative would be the Park Preserve alternative. This alternative would reduce Impact 3.4-2 by developing a passive park surrounding three out of four of the site's jurisdictional wetlands. However, this alternative would not avoid all of the significant impacts associated with the Project and all of the identified mitigation would still be required.

Table 5-7 provides an overview of impacts compared to the Proposed Project.

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.1 Aesthetics/Visual Resources					
3.1-1: Would the Project have a substantial adverse effect on a scenic vista? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.1-2: Would the Project conflict with applicable regulations governing scenic quality or substantially degrade the existing visual character or quality of public views of the site and its surroundings? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.1-3: Would the Proposed Project potentially create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? This would be a potentially significant impact.	LS/M	NI	LS/M	LS/M	LS/M
3.1-4: Would the Proposed Project contribute to cumulative changes in the existing visual character or conflict with applicable regulations governing scenic quality? The project's contribution would not be considerable.	LS	NI	LS	LS	LS
3.1-5: Would the Proposed Project contribute to a cumulative increase in light and glare? The project's contribution would not be considerable with mitigation.	LS/M	NI	LS/M	LS/M	LS/M

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.2 Agricultural and Forestry Resources					
3.2-1: Would the Proposed Project convert Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? This is a less-than-significant impact.	LS	NI	LS	LS	LS
3.2-2: Would the Proposed Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use? This is a less-than-significant impact.	LS	NI	LS	LS	LS
3.2-3: Would the Proposed Project contribute to cumulative impacts associated with the loss or conversion of existing agricultural resources? The project would result in a less than considerable contribution.	LS	NI	LS	LS	LS
3.3 Air Quality					
3.3-1: Would implementation of the Proposed Project conflict with or obstruct implementation of the applicable air quality plan? This is a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.3-2: Would implementation of the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard? This is a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.3-3: Would implementation of the Proposed Project expose sensitive receptors to substantial pollutant concentrations? This is a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.3-4: Would the Proposed Project contribute to cumulative air quality emissions within the existing area? The contribution would not be considerable.	LS	NI	LS+	LS	LS+

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.4 Biological Resources					
3.4-1: Would the Proposed Project have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? This would be a significant impact.	LS/M	NI	LS/M	LS/M	LS/M
3.4-2: Would the Proposed Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means? This would be a significant impact.	LS/M	NI	LS/M	LS/M-	LS/M-
3.4-3: Would the Proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? This would be a potentially significant impact.	LS/M	NI	LS/M	LS/M	LS/M
3.4-4: Would the Proposed Project contribute to cumulative impacts with respect to biological resources? The project's contribution would not be considerable.	LS	NI	LS	LS	LS
3.5 Cultural and Tribal Cultural Resources					
3.5-1: Would the Proposed Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5? This would be a significant impact.	LS/M	NI	LS/M	LS/M	LS/M
3.5-2: Would the Proposed Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? This would be a potentially significant impact.	LS/M	NI	LS/M	LS/M	LS/M
3.5-3: Would the Proposed Project disturb human remains, including those interred outside of formal cemeteries? This would be a less-than-significant impact.	LS	NI	LS	LS	LS

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.5-4: Would the proposed project cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or a resource determined by the lead agency to be significant? This impact is considered potentially significant.	LS/M	NI	LS/M	LS/M	LS/M
3.5-5: Would the Proposed Project contribute to cumulative impacts to cultural resources, including historical and archeological resources as defined in CEQA Guidelines Section 15064.5 and human remains? This impact is considered potentially significant.	LS/M	NI	LS/M	LS/M	LS/M
3.5-6: Would the Proposed Project contribute to cumulative impacts to tribal cultural resources, currently listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or a resource determined by the lead agency to be significant? This impact is considered potentially significant.	LS/M	NI	LS/M	LS/M	LS/M
3.6 Geology and Soils					
3.6-1: Would implementation of the Proposed Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or liquefaction? This would be a potentially significant impact.	LS/M	NI	LS/M	LS/M	LS/M
3.6-2: Would implementation of the Proposed Project occur on weak, compressible, and/or expansive soils that could result in adverse impacts on habitable structures? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.6-3: Would implementation of the Proposed Project directly or indirectly destroy a unique paleontological resource or site? This would be a potentially significant impact.	LS/M	NI	LS/M	LS/M	LS/M
3.6-4: Would the Proposed Project contribute to cumulative impacts related to geologic or seismic hazards? This would be a less than considerable contribution.	LS	NI	LS	LS	LS

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.7 Greenhouse Gas Emissions					
3.7-1: Would implementation of the Proposed Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? This would be a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.7-2: Would implementation of the Proposed Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? This would be a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.7-3: Would the Proposed Project contribute to cumulative GHG emissions within the region? The Project's contribution would not be considerable.	LS	NI	LS+	LS	LS+
3.8 Hazards and Hazardous Materials					
3.8-1: Would implementation of the Proposed Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.8-2: Would implementation of the Proposed Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? This would be a potentially significant impact.	LS/M	NI	LS/<	LS/M	LS/M
3.8-3: Would implementation of the Proposed Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.8-4: Would implementation of the Proposed Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? This would be a less-than-significant impact.	LS	NI	LS	LS	LS

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.8-5: Would implementation of the Proposed Project contribute to a cumulative increase in the potential exposure of people to sites where soil contamination could be present from past or current uses, or to hazards associated with the use and transport of hazardous materials? The project's contribution would be less than considerable.	LS	NI	LS	LS	LS
3.9 Hydrology and Water Quality					
3.9-1: Would implementation of the Proposed Project violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.9-2: Would implementation of the Proposed Project deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.9-3: Would implementation of the Proposed Project substantially alter the existing drainage pattern of the site or area through the addition of impervious surfaces resulting in erosion or siltation on- or off-site; increasing the rate or amount of surface runoff resulting in flooding on- or off-site; contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide polluted runoff; or impede or redirect flood flows? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.9-4: Would implementation of the Proposed Project release pollutants during flooding? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.9-5: Would implementation of the Proposed Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? This would be a less-than-significant impact.	LS	NI	LS	LS	LS

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.10 Land Use					
3.10-1: Would implementation of the Proposed Project conflict with the City's 1993 General Plan policies or other regulations adopted for the purpose of avoiding or mitigating an environmental effect? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.11 Noise and Vibration					
3.11-1: Would short-term construction noise levels cause a substantial temporary increase in ambient noise levels? This would be a potentially significant impact.	LS/M	NI	LS/M+	LS/M	LS/M+
3.11-2: Would existing residential areas be exposed to vibration peak-particle velocities greater than 0.2-inch per second or vibration levels greater than 80 VdB due to project construction? This would be a less than significant impact.	LS	NI	LS	LS	LS
3.11-3: Would on-site operation noise from the proposed residences result in noise exposure levels that would impact adjacent residences? The impact would be less than significant.	LS	NI	LS+	LS	LS+
3.11-4: Would the Proposed Project vehicle trips result in off-site roadway noise level increases that could impact noise sensitive land uses located along such roadways? The impact would be less than significant.	LS	NI	LS+	LS	LS+
3.11-5: Would the Proposed Project, in addition to cumulative development in the City, increase traffic noise that exceeds the City's noise standards? The Project's contribution would not be considerable.	LS	NI	LS	LS	LS
3.12 Public Services and Recreation					
3.12-1: Would the Proposed Project increase demand for public services requiring the need to construct new facilities, or expand existing facilities, the construction of which could cause significant environmental impacts? This would be a less-than-significant impact.	LS	NI	LS+	LS	LS+

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.12-2: Would the Proposed Project increase the use of existing neighborhood parks or other recreational services such that a substantial physical deterioration of the facility would occur, or require the construction or expansion of facilities that could have a physical adverse effect on the environment? This would be a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.12-3: Would the Proposed Project contribute to a cumulative increase in demand for public services, schools, and recreation facilities? The Project's contribution would not be considerable.	LS	NI	LS+	LS	LS+
3.13 Utilities					
3.13-1: Would the Proposed Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities? This is a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.13-2: Would the Proposed Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? This is a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.13-3: Would the Proposed Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? This is a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.13-4: Would the Proposed Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? This is a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.13-5: Would the proposed project comply with federal, state, and local statutes and regulations related to solid waste? This is a less-than-significant impact.	LS	NI	LS+	LS	LS+

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.13-6: Would the Proposed Project contribute to an increase in demand for water supply, wastewater treatment, stormwater or solid waste? The Project's contribution would not be considerable.	LS	NI	LS+	LS	LS+
3.14 Transportation and Traffic					
3.14-1: Would the Proposed Project conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? This would be a less-than-significant impact.	LS	NI	LS	LS	LS
3.14-2: Would the Proposed Project conflict or be inconsistent with CEQA Guidelines section 15064.3(b)? This is a significant impact.	SU	NI	SU	SU	NI
3.14-3: Would the Proposed Project increase hazards due to a geometric design feature or incompatible use? This is a less-than-significant impact.	LS	NI	LS	LS	LS
3.14-4: Would the Proposed Project result in inadequate emergency access. This is a less-than-significant impact.	LS	NI	LS	LS	LS
3.14-5: Under Cumulative conditions, would the Proposed Project conflict or be inconsistent with CEQA Guidelines section 15064.3(b)? This is considered a significant impact.	SU	NI	NI	NI	NI
3.14-6: Under Cumulative conditions, would the Proposed Project increase hazards due to a geometric design feature or incompatible use? This is considered a less than significant impact.	LS	NI	SU	SU	SU
3.15 Energy					
3.15-1: Would implementation of the Proposed Project result in wasteful, inefficient or unnecessary consumption of energy resources during construction or operation? This would be a less-than-significant impact.	LS	NI	LS+	LS	LS+
3.15-2: Would implementation of the Proposed Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? This would be a less-than-significant impact.	LS	NI	LS+	LS	LS+

Table 5-7
Comparison of Project Alternatives

Impact	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: No project/general Plan	Alternative 3: Park Preserve	Alternative 4: Increased Density/Affordable Housing
3.15-3: Would the Proposed Project contribute to an increase in wasteful, inefficient or unnecessary consumption of energy resources during construction or operation? The Project's contribution would not be considerable.	LS	NI	LS+	LS	LS+

Notes:
LS = Impacts less than significant
NI = No impact
LS/M = Impacts less than significant after mitigation
PS = Potentially significant (mitigation not determined)
SU= Significant and Unavoidable
"+" indicates the impact is more severe than the Project impact
"-" indicates that the impact is less severe than the Project impact

CHAPTER 6
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Appendix A

Hunter Subdivision Hydraulic Modeling Analysis

PROJECT MEMORANDUM

HUNTER SUBDIVISION HYDRAULIC MODELING ANALYSIS

Date: June 24, 2022

City of St. Helena

Prepared By:	Ryan Orgill, P.E. and Mike Wetterau
Reviewed By:	Tim Loper, P.E.
Subject:	Hunter Subdivision Hydraulic Modeling Analysis

Purpose

The City of St. Helena (City) contracted Carollo Engineers, Inc. (Carollo) to conduct a hydraulic analysis of the impact that the proposed Hunter Subdivision (Development) will have on the City's wastewater collection system.

Background

The City contracted Carollo to prepare their Integrated Utility Master Plan (Master Plan). As part of the Master Plan, Carolllo constructed a hydraulic model of the City's wastewater collection system using the InfoSWMM software package, developed by Innovyze, Inc. The hydraulic model was used to perform a capacity analysis to identify capacity deficiencies within the collection system under peak flow conditions.

The City has received a request from the developer to construct a new development within the City. The proposed development is located at the eastern end of Adams Steet in the northeastern portion of the City, as shown on Figure 1. The developer proposes to connect 51 single family residences (SFR), 25 multi-family residences (MFR), and 11 accessory dwelling units (ADUs) to the City's collection system. A summary of the proposed development is summarized in Table 1.

Table 1 Hunter Subdivision Summary

	Dwelling Units	Area (acres)
Single Family Residence	51	16.9
Multi-Family Residence	25	3.1
ADUs	11	--
Non-Developed	--	0.6

Notes:
(1) Source: Request for Proposals, Hunter Property Residential Subdivision Project (September 14, 2017).

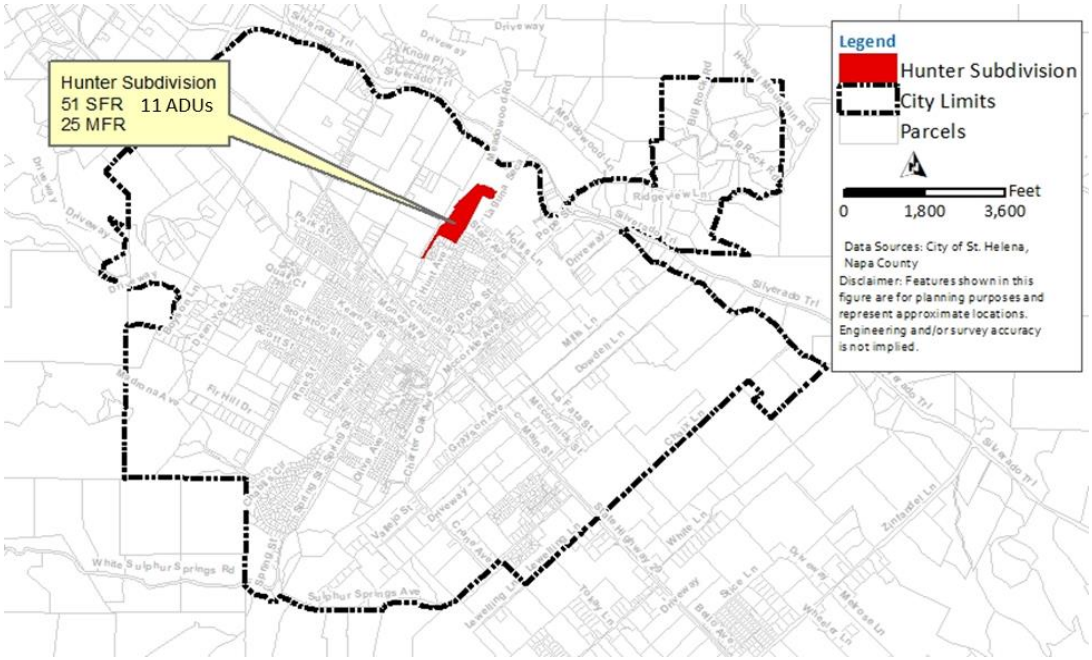

Figure 1 Hunter Subdivision

Flow Projections

The developer plans to develop approximately 20.6 acres (ac) with 51 SFR, and 25 MFR. Flow estimates were developed for the proposed development consistent with the City's Master Plan. Table 2 summarizes the ADWF estimates for the proposed development. The proposed development is estimated to increase the ADWF by approximately 12,289 gallons per day (gpd) or 0.01 million gallons per day (mgd). The peak rain derived inflow and infiltration (RDII) estimates for the proposed developments were developed based on a peak RDII rate of 500 gpd/ac, which is consistent with the Master Plan. With an area of 20.6 ac, the proposed development has a projected peak RDII contribution of 9,900 gpd (0.01 mgd). The estimated peak wet weather flow (PWWF) associated with the proposed development is 23,400 gpd (0.02 mgd).

Table 2 Hunter Subdivision Flow Projections

	ADWF (gpd)	Peak RDII (gpd)
Single Family Residence	8,200	8,300
Multi-Family Residence	4,000	1,600
ADUs	1,800	0
Non-Developed	0	30
Total	**14,000**	**9,900**

Notes:
(1) ADWF is calculated by multiplying the projected increase in residential units by the residential density of 2.45 persons per household and multiplying the result by the per capita flowrate of 66 gpcd.
(2) Planned developments within the existing service area were assigned a peak RDII rate of 500 gpd/ac.

Model Update

This section discusses the necessary model updates to properly evaluate the impacts that the proposed development has on the City's collection system. They hydraulic model was updated by adding the wastewater loads to the of point of connection at the intersection of Del Rio Court and Paseo Grand Drive.

Evaluation Criteria

The evaluation criteria used in this this study are consistent with the evaluation criteria used in Master Plan. The following summarizes the evaluation criteria used for this study:

- For existing sewers under PWWF condition, a minimum surcharge depth of three feet below the manhole rim.
- For new sewers under PWWF condition, a maximum flow depth to pipe diameter (d/D) ratio of 0.75.
- Under, Peak Dry Weather Flow (PDWF), no surcharging is allowed.

Hydraulic Analysis

The capacity evaluation identifies areas in the collection system where flow restrictions occur or where pipe capacity is insufficient to convey design flows. Sewers that lack sufficient capacity to convey design flows create bottlenecks in the collection system that can potentially cause sanitary sewer overflows (SSOs). This section discusses the impacts of the proposed development and verifies if the recommended improvement project sizing developed in the Master Plan are still adequate.

Under existing conditions, the Master Plan showed that there is sufficient capacity in the system under dry weather conditions, but under PWWF conditions, deficiencies upstream of the proposed development's point of connection were identified. After replacing a capacity limited (bottleneck) sewer this allowed for higher peak flows to be carried to downstream sewers. In some cases, this increase in peak flow overwhelms the downstream sewers, which creates additional deficiencies. This was the case for proposed project WWGM-6 from the Master Plan. Project WWGM-6 includes the replacement of approximately 450 feet of 15-inch, and 18-inch diameter pipeline along Del Campo Court, between Hunt Avenue and Paseo Grand Drive; and 910 feet of 18-inch diameter pipeline along Paseo Gran Drive, between Del Campo Court and Los Robles Court. The flow levels of the pipeline cause an SSO upstream under PWWF conditions. To mitigate the risk of SSO occurring during PWWF conditions, it is recommended that the existing pipeline be replaced with a 21-inch diameter pipeline. Project WWGM-6 alignment is shown in purple on Figure 2. This is the only project downstream of the proposed development's point of connection, which is shown on Figure 2.

Under dry weather conditions, the addition of the Hunter development did not trigger any capacity deficiencies. Under PWWF, the addition of the Hunter development did not identify any additional deficiencies downstream of the proposed development. The hydraulic model found that the existing system with improvements have sufficient to convey the projected build out flows identified in the Master Plan as well as the additional flow from the proposed development. The hydraulic analysis verified that the recommended improvement project sizing developed in the Master Plan are still valid.

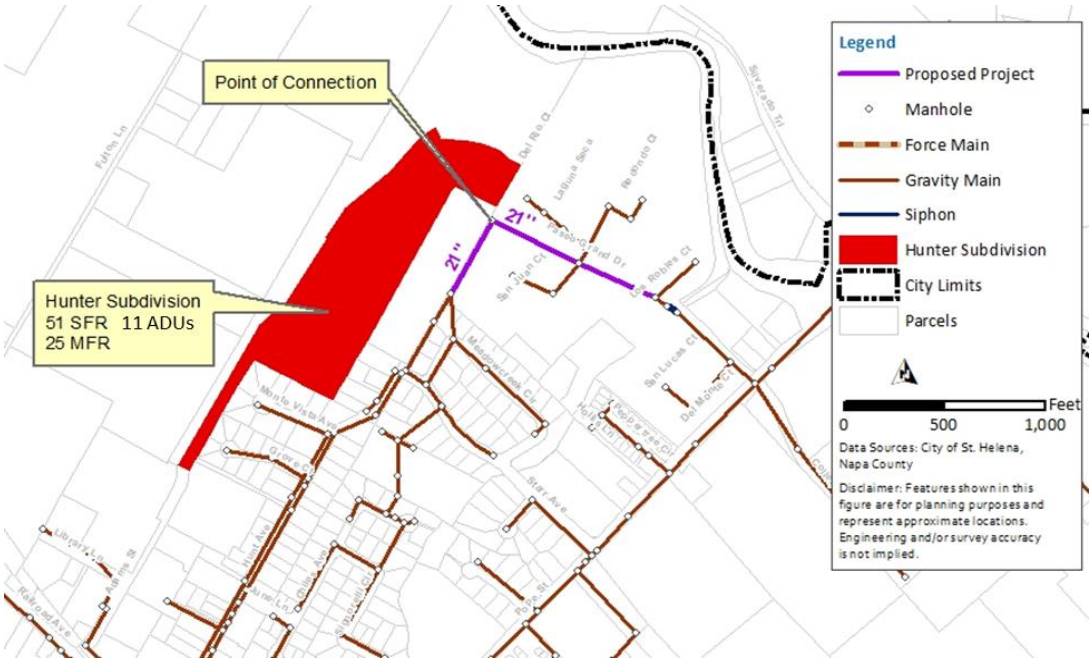

Figure 2 Downstream Recommended Improvements

Cost Share

This section discusses the project cost share that Hunter Subdivision is responsible for paying. Cost share is determined based on contribution of average dry weather flow (ADWF) as well as PWWF. The Hunter Subdivision is responsible for paying a proportion of Master Plan project WWGM-6 since, it is the only Master Plan project downstream of the point of connection and no additional deficiencies were identified. Table 3 summarizes the contributing flows from various users at Project WWGM-6 under buildout ADWF conditions and PWWF conditions. Based on this analysis Hunter Subdivision is responsible for paying six percent of $608,000 or $36,500 (ENR 20-City Average Construction Cost Index for April 2020 of 11,413) of proposed Master Plan project WWGM-6 based on the ADWF contribution.

Table 3 Hunter Subdivision Cost Share

User	ADWF (mgd)	Peak Wet Weather Flow with Master Plan Improvements (mgd)	Percent of ADWF	Percent of PWWF
Single Family Residence	0.14	4.15	93%	99.5%
Hunter Subdivision	0.01	0.02	6%	0.5%
Other Future Users	< 0.01	<0.01	1%	<0.1%

Conclusion

The updated hydraulic model was used to evaluate the impact that the proposed developments have on downstream collection system under various conditions. The hydraulic model verified that the recommended improvement project sizing developed in the Master Plan are still adequate. Based on the project cost share analysis, Hunter Subdivision is responsible for paying six percent or $36,500 (ENR 20-City Average Construction Cost Index for April 2020 of 11,413) of Master Plan project WWGM-6 based on their ADWF contribution to the system.

Prepared by:

Author Name: Ryan Orgill, P.E.

Appendix B

Attachments to Letters 45, 46, 65 and 84

ATTACHMENT TO LETTER 45

Segregation by Design

By Jessica Trounstine
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Abstract:
Over the course of the 20th century the spatial scale of residential segregation along race and class lines increased. In the late 1800s, whites and people of color, renters and owners, poor and wealthy, were separated from each other in small clusters, so that residential segregation occurred block-to-block. By the middle of the 20th century segregation patterns had transformed; residents became segregated neighborhood-to-neighborhood. Throughout the post-war period, segregation between whole cities rose as the nation suburbanized. In recent decades, city-to-city segregation has remained remarkably persistent despite increasing neighborhood integration. Because political representation is geographically determined, these changing patterns have had profound political consequences – generating opportunities for exclusion and increasing polarization. I argue that local governments have been instrumental in driving and shaping these patterns; and they have done so largely in the name of protecting both property values and exclusive access to public goods for white property owners. When property values and public goods exclusivity were threatened, property owners changed their tactics – shifting the spatial of segregation higher. This process has always been Segregation by Design.

Conventional wisdom holds that segregation and the resulting deficit in services that the poor and people of color experience in American cities is driven by a combination of individual racial prejudices, market logic, and federal policy. This is an insufficient account because it ignores the institutional setting in which racism, economics, and federal law are embedded. Local politics structures the way in which *all* of these forces unfold.

Using qualitative historical evidence from large cities throughout the United States and quantitative data from hundreds of cities, I demonstrate that segregation and the unequal distribution of public goods accruing to individuals and neighborhoods are a function of local policies and political battles. Land-use planning, zoning, and redevelopment have been utilized by white homeowners and businesses seeking to enhance property values and monopolize public goods to generate segregation and inequality in access to benefits for over 100 years.

The changing spatial patterns of segregation have had important implications for political representation. Poor and minority residents have become more isolated and less able to secure political responsiveness and public benefits. In turn, segregation affects both local and national politics. In cities, segregated communities are more polarized and less willing to fund public goods. At the national level, neighborhoods that successfully resisted integration during the civil rights era are markedly more conservative today.

Instead of receding, segregation within cities and between cities and suburbs has grown over the past several decades, further antagonizing the imbalance of public benefits between the haves and the have-nots.

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Introduction

"Segregated people in a nation that professes to be a democracy soon become a frustrated people. Those who segregate others soon become frightened, insecure people forced to accept and invent prejudice to justify their actions" Robert C. Weaver, *The Negro Ghetto*, 1948

City services sustain, prolong, and even save lives. In the latter half of the 19th century, urban American began a rapid ascent. City populations and economies were booming. But so too were their filth, their disease, and their divisions. By 1900, infectious and parasitic diseases killed nearly 8 in every 1,000 residents; accounting for more than 45% of all deaths (Tippett 2014) and more than 60% of deaths in children (Guyer et al 2000).[1] Between 1900 and 1940, the overall mortality rate in the United States declined by 35%[2] (Linder and Grove 1947) and the infectious disease mortality rate declined by 75% (CDC 1999).[3] In some cities in 1900, 30% of babies would not live to celebrate their first birthday (Meckel 1990). Estimates indicate that between one quarter and one half the decline in total mortality can be attributed to the development of public water and sewer systems. Local public works significantly reduced outbreaks of diseases like cholera, typhoid fever, diarrheal diseases, and malaria (Cutler and Miller 2006, Troesken 2004).[4] Over time, the growth of municipal fire and police forces, street cleaning and refuse disposal, childhood vaccination and physical examination programs, regulation of food supplies (e.g. requirements for milk pasteurization), and the implementation of

[1] Pediatrics. 2000 Dec;106(6):1307-17. Annual summary of vital statistics: trends in the health of Americans during the 20th century. Guyer B1, Freedman MA, Strobino DM, Sondik EJ.
[2] Total mortality declined from 17 per 1,000 persons to 11 per 1,000 persons.
[3] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4829a1.htm#fig1
[4] It is important to note that the dramatic improvement in mortality from water and sewer systems required the development of filtration and treatment techniques, which were not immediately available when the systems were first built.

building codes all worked to prolong life expectancy (Condran and Cheney 1982, Haines 2001, CDC 1999).

However, such benefits were neither inevitable nor universal. From the beginning poor and minority neighborhoods received fewer and lower quality services: they were less likely to be connected to sewers, have graded and paved streets, or benefit from disease mitigation programs.[5] Today, the quality of public goods in the United States remains highly variable. Some people have access to well-paved and plowed roads, sewers that never overflow, public parks with swing sets and restrooms, adequately staffed police and fire forces, and clean water. Others do not have access to these resources. The quality of such services is largely a function of the neighborhood, city, and state in which a person resides. The degree to which the poor and people of color have been concentrated into identifiable residential locations (e.g. segregation), varies from place and to place, and everywhere has changed dramatically over time.

Over the course of the 20th century the spatial scale of residential segregation along race and class lines increased (Logan et al 2015, Reardon et al 2009, Lee et al 2008). In the late 1800s, whites and people of color, renters and owners, poor and wealthy, were separated from each other in small clusters, so that residential segregation occurred block-to-block. By the middle of the 20th century segregation patterns had transformed; residents became segregated neighborhood-to-neighborhood. Throughout the post-war period, segregation between whole cities rose as the nation suburbanized. In recent decades, city-to-city segregation has remained remarkably persistent despite increasing neighborhood integration. Because political representation is geographically determined, these changing patterns have had profound political

[5] This book explores race and class divisions in local politics and residential locations. There are many ways one might go about defining these groups. As explained in more detail in Chapter 1, I focus on divisions between whites and nonwhites, and homeowners and renters. I use the terms minority and nonwhite interchangeably. I also use the terms black and African American interchangeably.

consequences – generating opportunities for exclusion and increasing polarization. I argue that local governments have been instrumental in driving and shaping these patterns; and they have done so largely in the name of protecting both property values and exclusive access to public goods for white property owners. When property values and public goods exclusivity were threatened, property owners changed their tactics – shifting the spatial of segregation higher. This process has always been Segregation by Design.

An example from Southern New Jersey is illustrative. Camden and Cherry Hill, New Jersey are similarly sized cities, just across the Delaware River from Philadelphia. Camden is home to two superfund (toxic waste) sites; Cherry Hill is home to none.[6] In Camden only 1.7% of state roads had good pavement in 2004[7] compared to 35% in Cherry Hill.[8] Camden has 22 combined sewer overflow outfalls (where raw sewage and storm water may be released to the surface during wet weather), while Cherry Hill has zero. Camden offers no e-waste recycling and no yard waste collection; Cherry Hill provides both. In 2012, Camden's water supply ran so low that residents were required to boil water for consumption and were prohibited from watering their gardens.[9] In contrast, Cherry Hill has a clean, plentiful water supply. The Cherry Hill Public Library has more than 400,000 circulating materials, more than 300 adult programs and classes, and 67 public computers.[10] In 2011, Camden shuttered the doors of its main library and handed control of the remaining two small branches to the county.[11] Cherry Hill offers 63 recreational facilities (parks, art centers, tennis courts, etc.) for its residents and supports 13

[6] https://www.epa.gov/superfund/search-superfund-sites-where-you-live
[7] http://www.state.nj.us/transportation/works/njchoices/pdf/camden.pdf
[8] Personal communication with New Jersey Department of Transportation. The NJDOT provided data from the NJDOT Pavement Management System by email. Available from the author by request.
[9] http://www.nj.com/news/index.ssf/2012/06/camden_residents_advised_to_bo.html
[10] http://www.chplnj.org/about/documents/2015%20Annual%20Report%20-%20FINAL.pdf
[11] http://www.nj.com/news/index.ssf/2011/02/main_branch_of_camden_public_l.html

different swim clubs.[12] Camden has 25 parks and 8 community centers.[13] Between 2007 and 2012, Camden's city budget declined by about $245 per resident, while Cherry Hill's increased by about $12 per capita. Clearly, living in Camden is unlike living in Cherry Hill. So, how did Cherry Hill and Camden get to be so different?

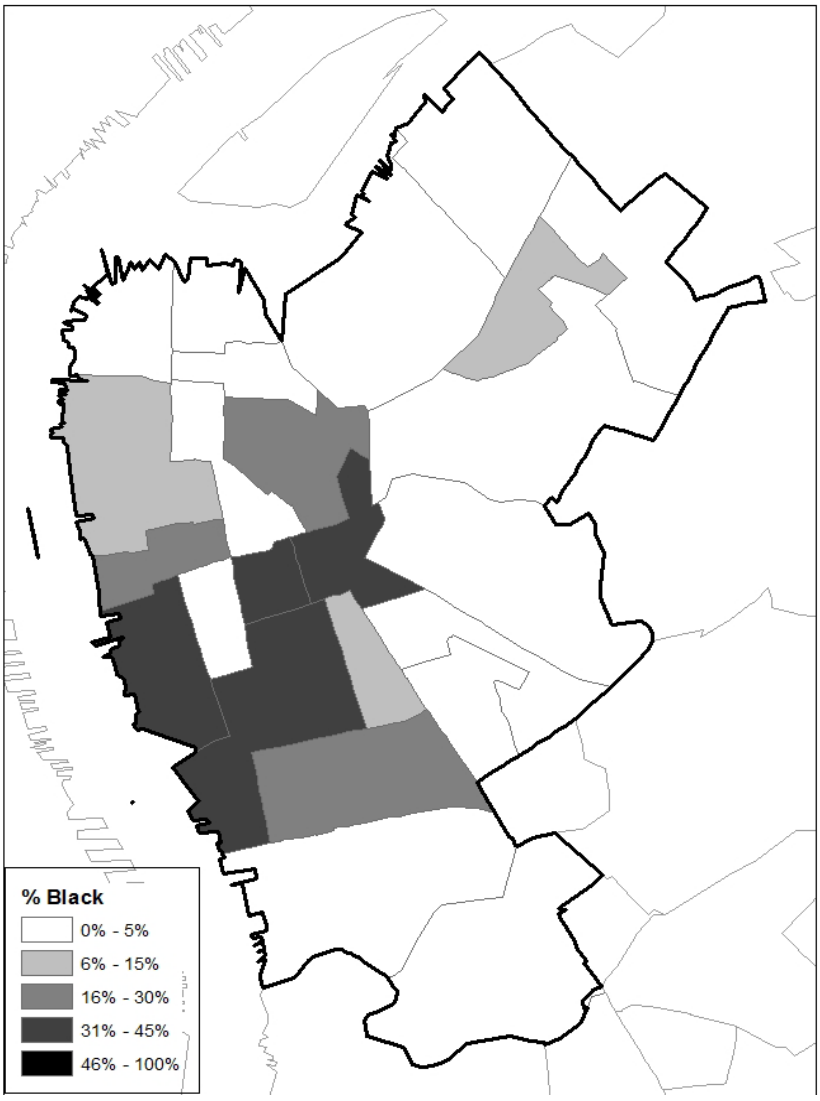
The story begins with a focus on Camden at the turn of the century. Although Cherry Hill was incorporated as a municipality in 1844, it remained a small, undeveloped agricultural community in the first few decades of the 20th century. In 1900, Camden had a population of nearly 76,000 residents. The city boasted 55 miles of sewers, 79 miles of water mains, and about 38% of the city's streets were paved; figures that suggest that Camden's development was right in-line with national averages. Also similar to other cities, were Camden's level of race and class segregation. By the turn of the century, Camden was home to two well-established free black communities named Fettersville and Kaighnsville (Garwood 1999). Established in the 1830s (Fettersville) and 1840s (Kaighnsville), these communities were comprised of small lots affordable to people of modest incomes, many of whom were African American (Garwood 1999). One of Fettersville's neighborhood churches, the Macedonia African Methodist Episcopal Church, was believed to be a stop on the Underground Railroad (Garwood 1999). While the majority of Camden's black residents lived in Fettersville and Kaighnsville, both neighborhoods were predominately populated with white, working-class residents.

According to the 1900 Census, the wards representing Fettersville and Kaighnsville were about a quarter African American. For a city in which African Americans only comprised 8% of the total population, clearly, blacks were not evenly spread across the city. But, the extent and scale of black segregation would increase dramatically by 1940. By 1940, the share of black

[12] http://www.cherryhill-nj.com/Facilities
[13] http://ecode360.com/8508679

residents had increased to 11%, but this growth in the black population was concentrated geographically in the central and southern parts of town. Figure 1 shows that by 1940, the black concentration in parts of Camden exceeded 50%.

Figure 1: Segregation in Camden, 1940



The creation of Camden's segregated neighborhoods echoed the creation of segregated neighborhoods throughout the United States. Camden city government used zoning laws, the placement of segregated schools, and public housing to create and enforce residential segregation between whites and Africans Americans, as well as between renters and homeowners. New Jersey's zoning enabling statute specified that regulations "must be made with reasonable

consideration, among other things…with a view of conserving the value of property," (Cunningham 1965). Camden first authorized zoning in 1928 and like other early zoning adopters, moved quickly to ensure that land use policy was used strategically to protect the interests of white home-owning residents.

By 1930, Camden was a bustling central city. It had more than 118,000 residents and spent nearly $950 (in 2012 dollars) per capita on municipal expenditures – well above the national median. But the stress of the Great Depression left Camden with an enormous burden of vacant and uninhabitable properties (Housing in Camden, 1942)[14]. And, so it was one of the earliest recipients of federal slum clearance and public housing funding in the 1930s (Pommer 1978). In 1938, two buildings were erected – one for whites and one for blacks. When the program was expanded in the 1940s two more projects were built; also segregated. Unsurprisingly, the neighborhoods around each project increasingly came to reflect the race of public housing occupants (Williams 1966a[15]). Later, when Interstate 95 was run through the city, "an attempt [was] made to eliminate the Negro and Puerto Rican ghetto areas" (New Jersey State Attorney General report, quoted in Rose and Mohl 2012, p108).

Overtime, neighborhood segregation in Camden rose; climbing more than 50% in the first half of the 20th Century. As would be the case in cities throughout the United States, Camden's city government underprovided services to its black neighborhoods (Helzner 1968[16], Silvotti 1968[17])

[14] http://www.dvrbs.com/hacc/CamdenNJ-HousingAuthority.htm http://www.dvrbs.com/hacc/CamdenNJ-HousingAuthority.htm
[15] Camden Courier-Post, June 8, 1966
[16] Helzner, Gerald, Camden Courier-Post, March 7 1968, p 13
[17] Silvotti, Bert, Camden Courier-Post, March 18, 1968

Starting around the time of the Second World War, the city faced desegregation pressures on a number of different fronts. In 1881, the state of New Jersey passed a law prohibiting the segregation of schools by race (Wright 1953). But, as of 1944, no black children attended white elementary schools (Jensen 1948). When the NAACP sued the district, officials responded that black parents had simply not requested attendance at their neighborhood schools. So, the NAACP took out ads in the Camden Courier Post to convince parents to do just that. In 1947, hundreds of black children enrolled in previously all-white schools (Wright 1953).

School desegregation was just one of the first of many signs of racial transition in Camden. In 1951, the city witnessed its first biracial contest for city council when Dr. Ulysses S. Wiggins, the president of the Camden NAACP Branch, was nominated on the Republican ticket (Chicago Defender April 21, 1951). He lost, but in 1961, Elijah Perry became the city's first African American city council member (Riordan 1996[18]). In 1954, the New Jersey Supreme Court ordered public housing to be desegregated and the first black families moved into white buildings in 1966 (Williams 1966a, Williams 1966b[19]). And in 1969 and 1971, the city erupted in violent race riots, touched off by police brutality against black and Latino residents.

In 1940, the little hamlet of Cherry Hill had a population just under 6,000 residents; they were 91% white and 9% black.[20] Not only small, the city was economically weak, having defaulted on its bond obligations been placed in receivership by the state government during the Depression (Shay v Delaware 122 N.J.L. 313, 316 (N.J. 1939), Cammarota 2001). But after the war, while housing and schools in Camden were integrating, Cherry Hill's population and economy exploded, as was true of suburbs throughout the nation.

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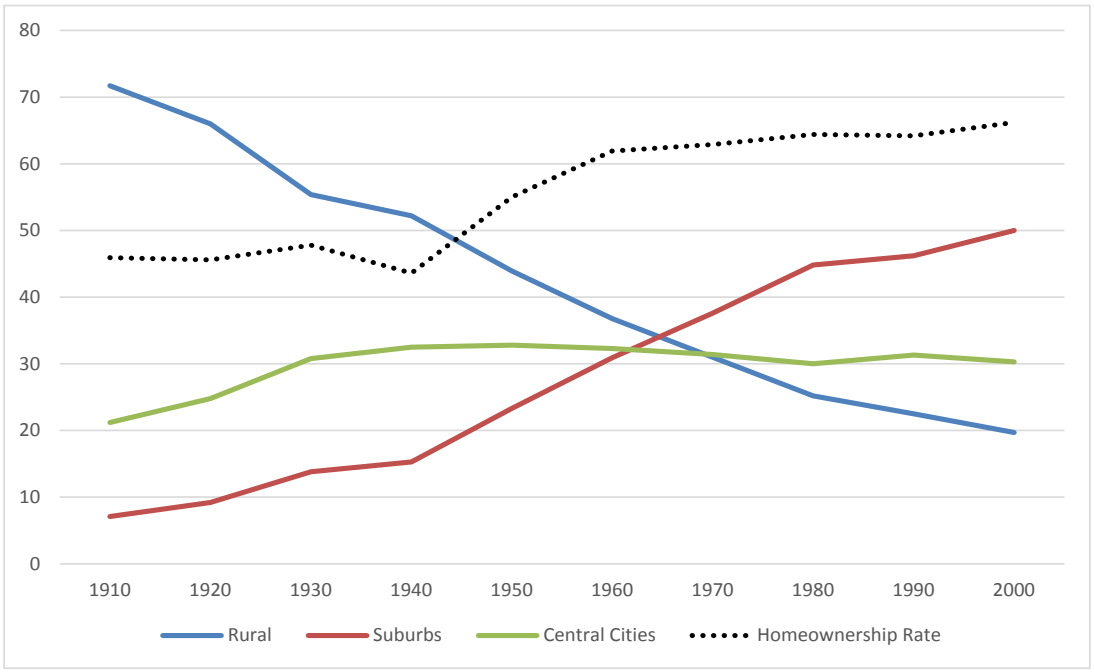
[18] Riordan, Camden Courier Post, February 2, 4B
[19] Camden Courier-Post, June 9, 1966, p17
[20] http://lwd.dol.state.nj.us/labor/lpa/census/2kpub/njsdcp3.pdf; Camden Historical Society scan****

Drawn to places like Cherry Hill by the attractiveness of low-cost federally insured mortgages, the development of new homes and new employment opportunities in outlying communities, and easy commuting along newly built federal highways, the nation suburbanized and white homebuyers moved to the periphery (Jackson 1985). After the war, Cherry Hill witnessed a tenfold increase in 30 years. During the same period, Camden lost 13% of its residents.

Figure 2 shows the share of the total population living in rural areas, central cities, and suburbs over the 20th century. The graph reveals that the pace of suburbanization increased sharply during the postwar period so that by 1970, a plurality of the population lived in suburbs.[21] The homeownership rate increased at the same time. This latter fact is important because it helps to explain the driving force behind exclusionary zoning adopted by suburban communities.

[21] Rural here refers to population outside of any metropolitan area. A suburb is an area inside of a metropolitan area, but outside of the central city. City refers to the central cities of metro areas. https://www.census.gov/prod/2002pubs/censr-4.pdf p33; https://www.census.gov/hhes/www/housing/census/historic/owner.html

Figure 2: Share of Total U.S. Population Living in Different Types of Places

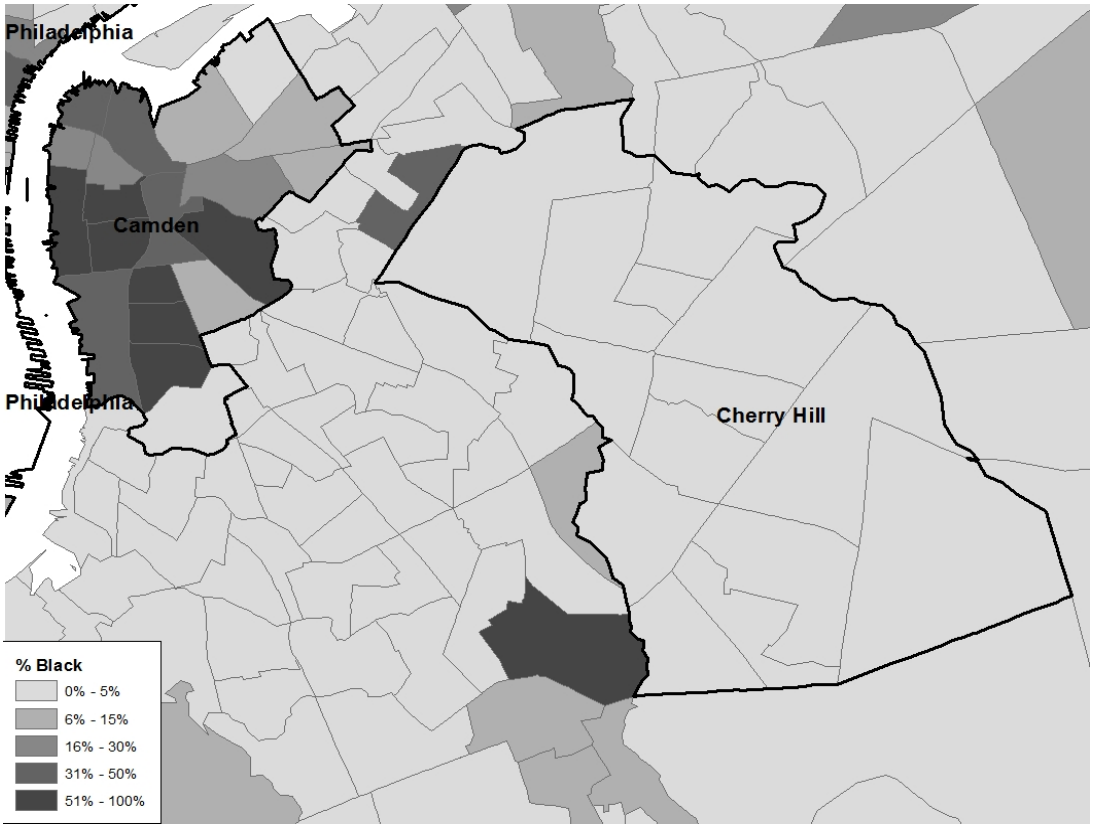


As Camden rushed to utilize more than $30 million in federal redevelopment funds to revitalize its flagging urban center, Cherry Hill was busy implementing zoning restrictions that effectively prohibited the development of low-or even moderate-income housing (Cammarota 2001). In 1975, black residents of Mount Laurel, New Jersey (a suburb close to Cherry Hill both geographically and demographically) along with several local chapters of the National Association for the Advancement of Colored People (NAACP), won a class action lawsuit challenging Cherry Hill's type of exclusionary zoning. As a direct result of this decision, Cherry Hill was required by the state to zone for thousands of low-income housing units. The city declined to do so. As of 2015, Cherry Hill continued to face litigation for its failure to zone for

affordable housing.[22] As is true in many places throughout the United States, exclusionary economic zoning cannot be disentangled from race. One activist argued "many residents carried racist feelings about affordable housing, fearing it would attract poor blacks and Hispanics."[23]

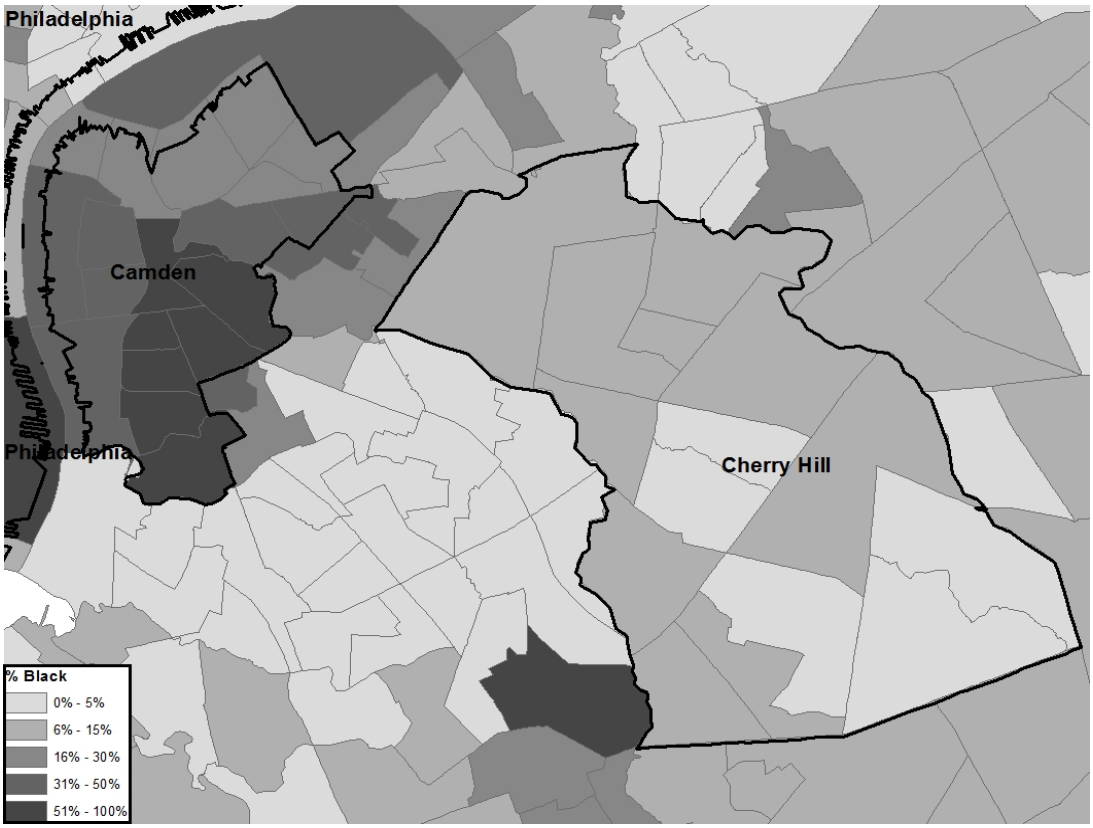
Figures 3 and 4 reveal how segregation between Camden and Cherry Hill changed between 1970 and 2010.

Figure 3: Segregation in Camden and Cherry Hill, 1970



[22] http://www.cherryhill-nj.com/DocumentCenter/View/2562, page 8;
[23] http://articles.philly.com/1989-09-10/news/26101167_1_bloat-prosperity-sewers-and-roads

Figure 4: Segregation in Camden and Cherry Hill, 2010



In 1960 Camden was 76% white; and the maps show that in 1970, although home to many more people of color than was true in 1940, Camden still had several exclusive white neighborhoods. These white neighborhoods had all completely disappeared by 2010. So, even though Cherry Hill diversified to a limited extent, a greater share of segregation occurs between these cities than within them.

Those who left Camden during the postwar period and those who moved to Cherry Hill were largely white, middle-and upper-class. As of 2014, about 39% of Camden's population owned their homes, 5% were white, and the annual median household income was $26,000. In Cherry Hill, 80% owned their homes, 75% were white, and the median household income was

$89,500.[24] In 2012, per capita taxes in Cherry Hill were double Camden's. Camden simply cannot afford to offer the services that Cherry Hill provides. The segregation along race and class lines between these two cities, and the resulting inequality in access to public goods was produced by public policy. It is a pattern that was replicated many times over throughout the United States; a postwar version of similar patterns that had developed at the turn of the 20th century.

A Theory of Segregation by Design

In the late 1800s as industrialization brought thousands of migrants and immigrants into cities, people of color and the poor were spatially isolated, not by ward or census tract, but by building and street (Logan et al 2015). What this means is that although blacks, Latinos, and Chinese residents were unlikely to live next door to white homeowners, they *were* quite likely to live down the street. By 1940, segregation shifted up to the neighborhood level (Cutler et al, Massey and Denton), so that large swaths of many cities had become predominately black or white, and both poor and wealthy residents became increasingly clustered in most places. By the onset of the Second World War, every large city in America had parts of town where people of color lived, and parts of town where the poor lived. Sometimes, but not always, these neighborhoods overlapped. Race and class segregation both increased by more than 50% between 1900 and 1940. These concentrating trends continued at a slower pace throughout the postwar period until 1970, when both race and class neighborhood segregation peaked. Neighborhood segregation by race has declined since 1970, but segregation by class has

[24] http://www.census.gov/quickfacts/table/PST045215/3410000,3400712280,00

increased.[25] During the post-war period segregation between cities increased and has remained stable since that time (Massey and Hajnal 1995, Farrell 2008, Fischer et al 2004).

Two classic economic models of individual choice appear to predict these different patterns of segregation. Thomas Schelling (1971) argued that extreme racial segregation could result from individual decisions about where to live, given even mild preferences for having neighbors of the same race. Only a small number of racially intolerant white residents can cause a neighborhood to rapidly transition because as each intolerant white resident is replaced with a black neighbor, whites with lower and lower levels of intolerance choose to leave, creating neighborhood-to-neighborhood segregation. The second individual choice model predicts city-to-city segregation. Charles Tiebout (1956) proposed that residents with similar preferences for taxation and public goods provision should sort themselves into cities with like-minded neighbors. To the extent that heterogenous preferences for tax and spending levels (or ability to pay) overlap with heterogenous demographics, they will also generate segregation.[26]

The trouble is that both theories are subject to instability in the absence of collective enforcement mechanisms (Oates 1969, Oates 1981, Fischel 1992). That is, for an individual to ensure that her neighborhood remains white and has access to a nice public park, she needs the cooperation of her neighbors. But, neighbors may have individual incentives that undermine the achievement of other residents' collective goals. For instance, it can be extremely lucrative for a white homeowner to sell her home to a black buyer. This is especially likely to be the case when black housing options are restricted and when the black population is expanding. As Hamilton

[25] The precise pattern of class segregation depends on the measures used to indicate class. Income segregation has increased significantly since the 1970s (although remains lower than racial segregation), while homeowner/renter segregation has increased by a smaller amount.

[26] Banzhaf and Walsh combine Schelling and Tiebout's insights into a single model that establishes that preferences over public goods and demographics are mutually reinforcing in the generation of segregation (2010).

(1975) explained, individual incentives can also undermine the Tiebout model. It also makes fiscal sense for a resident who prefers high quality public goods, but is unable to afford high tax rates, to locate the smallest, least expensive home in a wealthy city. The taxes this resident pays do not support the share of the public goods she utilizes, but she benefits from them nonetheless. In Hamilton's tale, this behavior could lead to wealthy residents chasing each other around to try and maintain exclusivity. In the first instance, the collective goal of maintaining the white neighborhood is undermined by sellers seeking the highest sale price. In the second instance, the provision of public goods is undermined by residents who do not pay the full cost.

Governments can promote collective action by generating enforcement of collective goals; and here it is *local* governments that play the starring role, because they alone regulate land-use. By invoking their powers of control over land-use and making choices about service provision, local governments can affect the aggregate demographic makeup of communities and the spatial distribution of residents and services, thereby generating and enforcing segregation. The goal of these policy choices is stability (or enhancement) of property values and the protection of public goods quality.

As North (1990) explains, the relative bargaining strength of different interests in any community will dictate the structure of its rules. Such rules, he tells us, are frequently devised in to promote private rather than public interests (p48). The history of local land-use planning and service provision fits squarely within this theoretical perspective. Property owners (and those who derive their livelihood from property, like realtors and lenders)[27], seek both property value appreciation and protection from losses in value. Because tax levels, service quality, and

[27] Developers, while also obviously earning their livelihood through property only sometimes have goals that are aligned with homeowners'. In some settings, developers prefer fewer regulations on development (allowing them to build smaller homes on smaller lots or denser multifamily structures, for example), but in others they are strong proponents of restrictive mechanisms like large lot zoning and racial covenants.

neighborhood demographics are capitalized in property values (see Hilber 2011 for a review), property owners invest considerable energy into dictating local policy (Fischel 2001, Stone 1989; Logan and Molotch 1978).

In the United States, property owners have always been disproportionately white; and property value has been tied to the race of occupants and neighbors (Hayward 2013, Freund 2007). Furthermore, as Bradford, Malt, and Oates (1969) argued, the quality of many public goods, like education and public safety, is predominantly affected by the characteristics of the residents themselves rather than inputs from the government. Together these circumstances have given property owners a powerful incentive to regulate who lives where since the very earliest years of urbanization. In particular, white property owners have long been concerned with excluding certain types of people from their communities.

From the earliest years of city development, white, native-born Americans had a racialized, classist understanding of property value and deservingness of public benefits. In particular, it was widely accepted that poor and minority neighbors negatively impacted property values and were less deserving of benefits than property owners and whites. Local policies like zoning and redevelopment serve these ends, and the result has been segregation along race and class lines.

The very first laws generating segregation were adopted in the first decade of the 20th century, to protect both property values and public goods exclusivity. Over the course of the next 100 years, when property owners were stymied in their attempts to create exclusivity by demographic shifts, loss of political control, or meddlesome higher levels of government seeking to promote equality, they adopted new strategies to achieve segregation, often increasing the spatial scale of exclusivity to achieve their goals. For instance, when first industrialization and

then the explosion of war time economies pulled great numbers of working class people of color to cities, many black and Latino neighborhoods swelled, threatening to spill into white, home-owner communities. City governments were called upon to use policy levers like land use regulations, zoning, the placement of thoroughfares and public housing to consolidate, and then circumscribe minority communities. When state and federal courts ordered desegregation of communal spaces like parks, golf courses, and swimming pools, local governments again used control over land use to alter the residential map. In the post-war period, big city governments became unreliable allies in this pursuit. When the federal court ordered desegregation of schools and when white owners saw threats to their political power in central cities, they ensured that suburban governments protected their interests.

The Geography of Inequality

Political geography is comprised of nested units: neighborhoods within wards, wards within cities, cities within states, and states within the nation. When residential segregation maps onto political geography, political divisions become fused with race and class divisions. This has two important consequences. First, segregation generates inequalities between race and class groups because in a world of scarce resources, the politically powerful deny public goods to those who are politically weak. Segregation within cities and suburbanization across city lines has meant that the benefits experienced by racial and ethnic minorities and low-income individuals are inferior to the benefits experienced by whites and the wealthy. Second, segregation generates political polarization between race and class groups and ultimately, inhibits cooperation.

Segregation generates inequalities because it allows political elites to target public goods toward supporters. At one time, public goods were segregated directly, through laws which

dictated that whites and blacks (and often Native Americans, Latinos, and Asians) could not attend the same schools, sit in the same area on public transportation, utilize the same parks, pools, libraries, or hospitals, be incarcerated in the same facility, or be buried in the same public cemeteries.[28] The legal segregation of public goods allowed city, county, and state governments to provide unequal funding for black and white schools, black and white hospitals, and black and white playgrounds (thereby generating unequal quality). This meant that compared to whites, blacks received inferior public goods than whites regardless of where they lived. But by the middle of the 20th century, public goods inequalities had largely come to be determined by residential segregation instead of directly. [29]

This transformation occurred in part as a response to the 1896 decision *Plessy v. Ferguson* which dictated equality in separate facilities. It was cumbersome and expensive to develop separate and equal services in diverse communities. The duplication of schools, parks, hospitals and cemeteries for black (Asian, Latino, and Native American) and white residents meant higher expenses (CQ Researcher 1947).[30] Such costs arose not only from the establishment of facilities that would not have been needed if the facilities were integrated, but also from the loss of efficiency that the replication of equipment and personnel entailed.[31] Obviously, these costs were minimized when nonwhite facilities were severely underfunded

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[28] Jim Crow laws demanded or permitted segregation in settings far beyond the reach of public goods including everything from seating in theaters and circuses, to marriage and sex, to the playing of checkers or dominos in private homes (Woodward 1955). Furthermore, laws mandating segregation were but one way in which the rights of racial and ethnic minorities were violated during this period. For instance, various laws barred minority individuals from testifying on juries against white defendants, denied them citizenship status, prohibited their access to certain professions, excluded them from owning land, and of course, prevented them from voting.

[29] The choice between segregating public goods directly and segregating public goods via residential segregation was not confined to the South. Leon Litwack (1961) writes of the antebellum north "legal and extralegal discrimination restricted Northern Negroes in virtually every phase of existence," (p64). More details on Jim Crow segregation in the north are provided in Chapter 3.

[30] http://library.cqpress.com/cqresearcher/document.php?id=cqresrre1947110700

[31] One study of St Louis's segregated school system found that 75% of the city's transportation costs in 1951-52 were spent transporting Negro school children who lived in outlying areas to colored schools in the center of the city (Russell 1954).

(Myrdal 1944, p342), but in the wake of *Plessy v. Ferguson* and successive lawsuits urging cities toward equal (albeit separate) facilities, residential segregation became an attractive alternative. After the many midcentury court decisions striking down any separate facilities (e.g. Brown v. Board of Education), residential segregation became the only remaining option (CQ Researcher 1947, Kruse 2005). In addition to being constitutional, residential segregation was also an efficient mechanism for producing inequalities across multiple public goods at once.

A similar transformation occurred in the post-war period, as neighborhood level segregation was traded for city level segregation. In 1948, when the Supreme Court ruled restrictive covenants unenforceable in *Shelley v. Kraemer*, white neighborhoods lost one of their most effective means of defense against integration. The 1968 Fair Housing Act further limited white collective action. As technological changes enhanced suburban service delivery and commute possibilities, and as the federal government subsidized homeownership outside of the central city, segregation across city lines rose. Moving outside of city boundaries allowed suburbanites to provide high levels of public goods for their residents without having to pay for services for nonresidents. For the privileged, suburbanization was an even more efficient mechanism of segregation than choosing separate neighborhoods within the city. As Hayward (2009) has argued, suburbs offered the opportunity to, "engage in exclusionary zoning practices…to opt out of supporting public housing…and even opt out of supporting public transportation within the boundaries of their municipalities," all while allowing suburbanites to, "pool their tax monies…to provide schooling and other public services." (p149). In addition to offering efficiency, suburbanization also freed residents from having to fight for control of the city government. Indeed, suburban flight was encouraged by a loss of political power in the central city.

In many ways, these inequalities in access to public goods are precisely the goal of segregation's promoters. But, a second consequence of increasing correspondence between political geography and demographic division, is an increase in political polarization. Within cities, segregation generates stark divides between racial groups, leading segregated cities to underprovide public goods. But, even beyond city borders, segregation is consequential. The process of building and defending white homeowner neighborhoods created new ideological commitments to a meritocratic discourse that depicted inequalities as being the result of the free-market, and choices made by black and poor residents, rather than the result of actions taken by government or white homeowners. The new ideology that was bred in defended white homeowner neighborhoods took root, growing into a modern conservatism that prioritized protection of property, self-reliance, and individual achievement (Self 2003, Lassiter 2006, Kruse 2005). Over the years, this conservatism has persisted, inculcating new neighbors with the same perspective.

Empirical Expectations

The preceding argument generates several broad predictions which I test in various ways throughout the coming chapters. First, I predict that some communities will be more likely to desire segregation than others: these are places that have a taste for segregation and/or have significant resources to protect. These places will be most likely to implement local policies like zoning, urban renewal, and restrictive land use regulations. When communities seeking segregation are thwarted in their ability to generate exclusivity, they'll seek to change the spatial scale of segregation – moving to exclusive neighborhoods and exclusive cities. Second, I predict that these local policies work to generate segregation along race and class lines. Third, I predict that residential segregation generates inequalities in access to public goods. Finally, I propose

that residential segregation will cause political polarization in both local and national politics. No chapter or time period contains tests of all of these predictions; but together they tell a compelling story. For more than 100 years property owners (and those who derive their livelihood from property) have urged local governments to enact policies that institutionalize segregation along race and class lines to protect their property values and control the distribution of public goods; and I show that they have been incredibly successful.

I find that segregation along both race and class lines has been promoted by white homeowners and land oriented businesses for more than 100 years. Where these interests dominated city government, segregation grew more rapidly. I also find that as segregation increased, service investment in white homeowner neighborhoods increased. As whites lost control over the distribution of benefits, they moved to the suburbs and continued to expand service delivery. Today, a greater share of public dollars is spent by suburbs than by central cities. Finally, I reveal that in more segregated places political polarization is greater and poor and minority residents have access to lower quality public goods.

Important Caveats

Schools (or lack thereof)

This is a book about segregation, and only rarely do I engage a discussion of schools. This will seem a glaring omission to many readers, especially because many pieces of my argument overlap with accounts offered by education scholars. The literature exploring inequality of educational opportunities is extremely dense and well developed (see Reardon and Owens 2014 for an overview). As Stephen Macedo writes, "Local control, when combined with local funding, and district-based assignment of pupils to schools, has created a geography marked by stark inequalities centered on class and race: a new form of separate and unequal"

(Macedo 2003, p743 in "School Reform and Equal Opportunity in America's Geography of Inequality"). The arguments that I advance here compliment and underscore much of this research. One might view this book as an extension of these arguments to the provision of *all non-school local public goods*.

My focus here is on the various policies that local governments use to generate segregation; and the consequences of segregation for local and national politics. The vast majority of the governments that I study do not play a direct role in the governance of schools or the provision of public education. That is, most cities in the United States do not spend money on educational services; and most public school students (about 85%) attend schools that are governed by school districts not municipalities. One could approach school district politics as I have done for municipalities – analyzing decisions about the drawing of catchment zones, policies on bussing, and the allocation of resources across schools in the same district. But, this would require vastly different data than what I have gathered.

That said, school enrollment and quality plays a major role in individual decisions about where to live. So while I do not analyze the politics of school districts, my argument attempts to take school dynamics into account when analyzing the impetus for segregation. For instance, I use federal desegregation orders to study how segregation changed in the post-war period.

Data Hurdles

The data that I use to reveal the patterns described above differs in important ways from previous research. Most scholars who analyze the determinants of segregation focus either on metropolitan level segregation (e.g. Dreier et al 2004, Jackson 1985) or neighborhood segregation (e.g. Massey and Denton 1993)[32]; and on racial segregation (e.g. Charles 2003) or

[32] M.J. Fischer (2008), Reardon, Yun and Eitle (2000), C.S. Fischer et al (2004), and Rhode and Strumpf (2003) are notable exceptions. However, none of these authors analyze the political causes or consequences of segregation.

class segregation (e.g. Bischoff and Reardon 2013) – but these types of sorting are intricately linked. Class segregation and racial segregation are correlated, but they are not identical. Determining both the causes and consequences of segregation requires taking these linkages into account. The data that I have collected measure segregation both within and across cities, they account for both race and class divisions, and cover city expenditures on a wide range of services during the entire 20th century. This required the encoding of archival data, the generation of new spatial data using GIS, and the compilation of thousands of digitized observations from the United States Census. The comprehensiveness of the data allows for a more complete picture of the patterns of segregation over time and allows for an analysis of the factors that give rise to this variation.

I find generally, that I am better able to explain the causes and consequences of racial segregation. In part this is because the data for measuring racial segregation are available for a longer time series and at a finer grain of detail than the data for measuring class segregation. But, the historical record is also clear that exclusion of other races has been a more powerful driver of these processes than exclusion of the poor. This is evidenced by the fact that many neighborhoods contain a mixture of homeowners and renters, as well as varied income levels, even when they are dominated by a single racial group. As a result, racial segregation has always been higher than class segregation. However, today, local policies that generate class based exclusion are generally upheld by courts, while race based exclusion is not. Additionally, income inequality has increased in recent decades. As a result, class segregation has risen and will likely continue to rise, even while racial segregation declines.

Throughout my empirical analyses I face profound causal challenges. In some cases my analysis is plagued by reverse causality: do white residents move to the suburbs because the

central city elected a black mayor, or did the moving of white residents make it possible for a black mayor to get elected? In other cases, my analysis suffers from an inability to disentangle selection from treatment: does living in a homogenous white neighborhood make people more conservative or do people with conservative views move to homogenous neighborhoods? In still other cases, my argument would be aided by evidence of strategy on the part of local elites, but none exists: zoning generates greater segregation, but could this have been an unintended consequence?

In each chapter I describe the hurdles presented by the (lack of) data and my strategies for overcoming them. Generally, I seek to build a case for my argument using both detailed qualitative evidence and quantitative evidence from hundreds or even thousands of places. I often draw on the timing of events for evidence of causality and, where I am able I utilize instrumental variables to underscore my findings.

Contributions to Existing Literature

This book contributes to a number of dense literatures including work focused on segregation, public goods, attitudes toward outgroups, and political inequality. Although a great deal has been written on each of these topics, very little research engages more than one of these areas. For instance, Tiebout's (1956) seminal article arguing that consumer-voters pick communities which best satisfy their preferences for public goods ignores the role of race, segregation, and inequality in these choices and is silent about the ways in which public goods packages are developed. Other scholars (Alesina et al 1998) show that diversity drives down collective investment in public goods, but do not consider the ways that geo-spatial arrangements might affect this relationship. Still others have shown that whites' desire for homogeneity has played a role in generating racial segregation between cities and school districts (Reber 2005,

Baum-Snow and Lutz 2011, Boustan 2010). However, these works largely ignore the political mechanisms by which such preferences are realized (e.g. the development of zoning policies).[33]

Outside of (excellent) case studies focused on one to two metropolitan areas at a time (Danielson 1976, Hirsch 1983, Sugrue 1996, Kruse 2005, Lassiter 2006, Kraus 2000), to date most of the research analyzing the relationship between segregation and public policy has focused on national level programs like the Federal Housing Administration underwriting guidelines (Jackson 1985) or the Home Owners Loan Corporation neighborhood investment ratings (Hillier 2005).[34] With such far reaching effects, the focus on these programs has been well placed, but has tended to obscure considerable subnational variation; and while the case studies offer invaluable historical detail, they are unable to provide evidence of broader patterns of the effect of local policies on segregation. In short, while scholars have documented changing patterns in racial and class segregation, they have not demonstrated the ongoing role of city politics and local service policy in creating segregation and growing inequality. I show how patterns of local service delivery, zoning laws, and other local policies not only mirrored patterns of segregation but also very much drove them – not only in the pre-civil rights era, but also in recent decades.

Although many scholars have suggested that segregation across neighborhoods or between cities and suburbs fosters inequalities in access to public goods (Massey and Denton

[33] Baum-Snow and Lutz analyze the effect of school district desegregation orders on suburbanization. So, while they focus on the effect of a public policy, they are not concerned with policies that intentionally aided segregationist preferences.

[34] Important exceptions include Rothwell (2011) who analyzes the effect of low density zoning on metropolitan area racial segregation and Dreier et al (2004) who suggest (although they do not provide direct evidence) that zoning and redevelopment affect economic segregation across cities. Cutler, Glaeser, and Vigdor (1999) find support for a theory of "collective action racism" prior to 1970. They show that housing prices for equivalent quality housing were higher for blacks than for whites implying that whites acted collectively to limit black housing choices. However, the authors do not provide any analysis of the types of collective action in which whites engaged beyond speculating that restrictive covenants and racial zoning may have played a role. Importantly, Cutler et al do not distinguish between collective actions that occur in the public versus private realm.

1993, Burns 1994, Dreier et al 2004), very little research offers systematic evidence of this intuition.[35] Other scholars have carefully documented the pernicious effects of segregation on individual level outcomes (Ananat 2011, Cutler and Glaeser 1997), but have not offered a direct link between these outcomes and allocation of public goods. I offer quantitative and qualitative data showing that segregation across both neighborhoods and cities allows governments to disinvest in poor and minority communities and this produces unequal access to public goods. These results help to explain why social mobility is tied to place, as scholars like Sharkey (2013) and Sampson (2012) find, and demonstrate the consequences of public policy and segregation for larger patterns of inequality.

Much of the work investigating the determinants of segregation (both within cities across neighborhoods, and within regions across cities and suburbs) argues or assumes that the important driver of racial segregation is prejudice – that is, attitudinal predispositions toward racial and ethnic minority groups. This is an insufficient account. It is insufficient first because racial segregation has not declined as precipitously as one would predict given dramatic changes in overt expressions of racism. I argue that the institutionalization of prejudice through local public policy makes segregation more rigid. Second, pure prejudice does little to explain the rise of class segregation. I argue that if we understand segregation as a mechanism to protect public goods and property values, increasing class segregation is predictable. Finally, a pure prejudice account leaves unexplored the basis for these predispositions. I argue that beliefs about the acceptability of different demographic groups as neighbors (e.g. what we might take to be pure

[35] An important exception is Troesken (2001) who provides direct evidence of the relationship between segregation and public goods inequalities. He shows that cities with racial segregation were more likely to generate unequal access to municipal water and sewer connections in the late 19th and early 20th centuries.

prejudice) were influenced by the distributions of public goods and battles over those distributions decades ago.

Contrary to some scholars' conclusion that the core problems of segregation have been alleviated, I show that segregation persists, that segregation has grown across cities, and that government policies continue to play a central role in perpetuating segregation.[36] White, wealthy Americans are still trying to segregate themselves. And local governments still tend to invest more toward whites and the wealthy. I build this argument through seven substantive chapters and a conclusion that considers omissions from the book and forecasts the path forward.

Chapter Summaries

In order to orient the study, in Chapter 1, I provide descriptive information regarding changes in segregation and public goods spending over the course of the 20th century. I offer an overview of patterns that will be linked through the chapters that follow. I begin by providing a broad overview of spending between 1900 and 1940. It reveals that cities increased expenditures on street paving and lighting, refuse collection, sewers, libraries, health, education, public safety, and recreation, and increased revenue from taxes. During this early period, cities became modern service providers.

Next, I explore early patterns of race and class segregation. I show that racial segregation increased dramatically between 1890 and 1940 while class segregation increased marginally. It was in the cities with the largest budgets that segregation increased the most. Then, I turn to analyzing fiscal and segregation patterns between 1970 and 2011. I argue that during this period, white property owners turned to suburbanization as their primary mechanism for protecting

[36] Several recent headlines make this claim "Glimpses of a Ghetto-Free Future," "Segregation Continues to Decline in Most U.S. Cities, Census Figures Show," "The End of the Segregated Century: Racial Separation in America's Neighborhoods, 1890-2010."

property values. After 1970 the dominant trend in both race and class segregation was increasing differentiation between cities. During this period, suburban governments grew more intensely than central cities so that by 2011, central cities accounted for a smaller share of total metro area spending than they had in 1970.

In Chapter 2, I provide the first piece of evidence directly linking the patterns described in Chapter 1 by showing that public goods considerations drove efforts to segregate in the early decades of the 20th century. Acting in response to white homeowners and land-oriented businesses, local government policy explicitly sought to exclude people of color from white neighborhoods and poor individuals from wealthy neighborhoods. In empirical analyses I analyze the factors that encouraged the adoption of zoning laws and the role that zoning laws played in the development of race and class segregation. I find that exclusion was most adamantly pursued in cities that had become significant providers of public goods, where property taxes were high (and so, raising property values was attractive), and where political support for Progressive reform was strongest. I supplement this analysis with qualitative evidence that reveals the many factors local governments utilized to promote segregation, including strategies like the siting of segregated public goods such as parks and schools. Finally, this chapter reveals that zoning laws had their intended effect: early zoning adopters segregated more rapidly over the next several decades compared to cities without similar ordinances and zoned cities witnessed greater inequalities in housing values.

Chapter 3 documents the unequal provision of public goods that early segregation allowed. Using historical case study evidence, I show that poor and minority neighborhoods consistently received worse public amenities like road paving, and health clinics. I draw on detailed ward level data from Baltimore, Boston, Chicago, and Philadelphia to show that sewer

extensions were less likely to be built in neighborhoods with higher proportions of African American and renting residents. As a result, inequality in water and sewer access was greater in more segregated places. I show that these inequalities persisted. Using data on all tracts in all cities in the United States, I provide evidence that whites and minorities, and renters and homeowners had differential rates of access to public sewers in more segregated places in 1970, 1980, and 1990. I argue that these inequalities in service provision affected the ways in which white and wealthy residents would come to view poor and minority neighbors. Daria Roithmayr (2014) points out, "we see the strongest evidence of continuing discrimination in housing markets" (p18). This is because the roots of this bias are whites' conscious and subconscious beliefs about the effect of nonwhite and renter neighbors on property values and the quality of public goods – beliefs that were fostered by government choices at the turn of the 20th century.

Chapter 4 provides evidence of municipal policy effects on segregation in the middle of the 20th Century. By 1940, segregation was entrenched, as were the unequal allocations of public goods. But patterns would change in the post war period. In some places segregation along racial lines increased, while in others it had already begun to decline (as it would everywhere after 1970). Class segregation began a slow ascent and then leveled off. As was the case in the first time period analyzed, local public policy played a role in these patterns. I provide evidence that cities that more vigorously implemented urban renewal programs grew more segregated along both race and class lines. I also show that during the 1960s and 70s, in many cities white homeowners lost the political power needed to police the borders of their neighborhoods and control the distribution of public goods. I argue that such changes made suburban living a more attractive option than living in homogenous neighborhoods within cities.

Between 1970 and 2000, the major change in segregation patterns occurred between cities. That is, neighborhoods became more racially integrated within cities, but whole cities became more racially homogenous. Class segregation across cities also increased during this period. Chapter 5 offers an analysis of the role of local political control in generating these changes. Using demographic and finance data from all metropolitan areas in the United States between 1980 and 2000, I show that larger budgets, higher spending on policing, and minority mayoral victories are associated with more segregation across city lines. Where whites maintained control they were less likely to move to the suburbs. Throughout the postwar period cities and suburbs alike moved away from explicitly racial strategies toward class based tactics, such as large lot zoning and limiting multi-family developments, to ensure segregation. I show that more restrictive zoning by suburban cities increased both race and class segregation. As a result, suburban communities made decisions that profoundly affected non-suburban residents while preventing them from participating in the decision making process. In this context, representative government, policy responsiveness, and political equality became hollow concepts.

In Chapters 6 and 7, I focus on the consequences of segregation for modern politics. In Chapter 6, I analyze the consequences of segregation within cities. Quite ironically given early claims that segregation was the best solution to racial discord, I show that segregation is associated with deep race and class divisions that dominate city politics today. Polarization makes cooperation difficult and, I show that segregated cities have smaller city budgets and spend less on individual categories of expenditure such as roads, policing, parks, and sewers. Underinvestment means that city services do not operate well. Focusing on one measurable area

of public goods provision, I demonstrate that sewer overflows are more frequent in segregated cities.

In Chapter 7, I focus on the effects of segregation for national level politics. I draw on case study and large-n evidence to show that the integration of public spaces and residential areas encouraged whites and the wealthy to move to the suburbs during the postwar period, which allowed for more control over political decisions and the distribution of public goods. Then, I draw on restricted-access General Social Survey data geo-coded to 1970 Census tracts to show that residents who live in neighborhoods that were whiter than the metropolitan area as a whole in 1970 are much more conservative than those who live in more integrated places. I argue that this conservatism is rooted in the battles over integration that occurred in earlier decades.

In the conclusion of the book, I pull the many pieces of evidence presented previously into a single framework and discuss what the future holds. I reiterate my main claim: local governments pursue segregation at the behest of politically powerful interests. This allows politicians to target public goods towards some residents and away from others, resulting in differential access to public goods. Segregation generates unequal political outcomes which in turn, reinforces segregation. By linking neighborhood level segregation to suburbanization, I suggest that preferences for separation have changed in form, but not intent over time. Going forward we can expect additional change. Rather than seeking residential segregation, some individuals will choose to leave the public realm altogether – relying more heavily on private provision of services like education, policing, and park space. We have some evidence that privatization has increased even as many cities have become more integrated. The drive to protect property values, ensure good schools for children, and safe streets for families has

remained a powerful force. In the final section of this concluding chapter I consider some potential policy solutions to these seemingly intractable problems. I suggest that the most promising path forward is to utilize lessons from school finance reform (e.g. Lafortune, Rothstein, and Schanzenbach 2015) to guide state governments' approach to producing more equal access to a range of local public goods.

Chapter 1: Segregation and Public Goods over the 20th century

At the turn of the 20th Century, cities in the United States experienced intense demographic change. The first waves of African American migrants left the South for Northern communities, and immigrants from Europe streamed across the borders until the onset of World War I and the implementation of restrictive immigration laws. By the middle of the Century, the spatial distribution of residents was markedly different than it had been 50 years prior; and patterns would change again over the ensuing 50 years. Until the onset of the Great Depression, expenditures by local governments also grew rapidly. It was during this period that the foundation for modern urban politics was laid across the nation. This growth in municipal spending continued unabated for the next 100 years, but it was uneven, favoring suburbs at the expense of cities. This chapter charts and links changes in both demographics and service provision in metropolitan America.

I begin with a presentation of data on the growth of expenditures during the first four decades of the 20th century. I analyze demographic correlates of this growth, showing that homeownership, wealth, diversity, and density were all associated with expanding municipal governments. This, I argue, explains why white homeowners and land-oriented businesses pursued residential segregation: to protect property values and capture public goods. Next, I present the changing patterns of race and class segregation for these early decades. I show that cities with greater spending became more segregated. I then turn to an analysis of spending and segregation between 1970 and 2010, concentrating on the effects of suburbanization. I provide evidence showing that the level at which segregation occurred shifted during this time. While neighborhoods within cities became less segregated, cities started to look increasingly different

from one another. As the next several chapters will reveal, the changing level of segregation has had significant implications for the allocation of resources.

The Rise of Urban America

In the year 1800, only 5% of the population of the United States lived in cities and approximately 90% of the workforce was tied to agriculture. For the next half century, this figure inched modestly upwards, so that by 1850, 15% of population lived in urban areas.[37] After the end of the Civil War, the pace of urbanization (and industrialization) increased dramatically. By 1900, the nation was 40% urban and in 1920, the Census reported a majority urban nation for the first time. This trend continued; today the nation is approximately 80% urban.

As industrialization advanced, massive demographic shifts accompanied the economic changes. Cities began to fill with migrants and immigrants seeking work in the new factories and service sectors. During this period, most workers commuted to their jobs by foot, limiting the distance residential neighborhoods could be located from places of employment. The result was massive overcrowding – in some cities as early as the first decades of the 1800s. Housing and sanitary capacities became overextended; epidemics and conflagrations were rampant. O'Connor (1984) offers a vivid description of early 19th century Boston:

> Within the heart of the old city…things had deteriorated badly over the years…Its meandering streets…were hedged in by four and five-story houses that blocked out the sunlight. Pedestrians were in constant danger of being knocked down by stagecoaches, or bowled over by droves of pigs being hustled to market….[An] abominable stench rose above it all. Not merely the oily fish smells from the docks, the briny tang of salt water, or the sickish odor of the mudflats at low tide. This was the repulsive reek of

[37] The Census determines whether a particular geographical area is urban based on population size and density. Rural territory is any area that is not urban. Starting in 1900, the Census has defined urban areas as all places with at least 2,500 residents. From 1910-1950, urban areas only included incorporated places (e.g. cities) that met the size threshold. In more recent decades, the determination has been a combination of size and density; urban areas contain at least 2,500 people have a density threshold of at least 1,000 people per square mile.

> uncontrolled street refuse and untended garbage. To make matters worse, the city's sewerage system emptied out into the Town Dock… (p80).

Despite the clear benefits of moving away from the center of town, the nature of transportation and the needs of industry meant that even while they grew larger and more diverse, cities in the 1800s experienced low levels of segregation along race and class lines. At this time, the population of urban blacks was heavily concentrated in Southern cities. My dataset includes demographics for 296 cities from the 1900 Census of Population and Housing. These cities housed about 1.2 million black residents; approximately 64% of whom lived in the South. In an early analysis of *The Negro Ghetto* (1948) Robert Weaver explained, "in the cities of the Old South, like Charleston and New Orleans…most of the dwellings occupied by Negroes were either servants' quarters in the rear of the better houses or shacks on streets where low-income groups of whites also lived," (p8). In the north, Weaver says blacks "usually lived in clusters in racially mixed neighborhoods," (p9-10). However, detailed research on New York and Chicago by Logan et al (2015) reveals that although northern blacks did not live in "*predominately* black neighborhoods", they did live in "*disproportionately* black…neighborhoods," (p1062). What this means, is that while neighborhoods were mixed in the aggregate (thereby generating low measures of segregation), the housing available to blacks and other racial minorities in urban areas, was nonetheless heavily restricted from the start. Yet, because political representation is frequently defined at the neighborhood level, with low levels of neighborhood segregation, blacks and other minorities were likely to benefit from public goods provided to white homeowners.

Until about 1930, "state and local governments were *the* governments of most Americans" (McDonald and Ward 1984, p14). This was especially true with respect to fiscal

affairs. To the extent that *any* government would have addressed the negative externalities associated with rapid urbanization, it would have been viewed as the responsibility of the city (and their parent states). Yet, throughout the first half of the 19th century, city governments were fairly limited in scope. The economies of early cities were largely commercial, and a dedication to privatism and the market generally dictated political affairs (Monkkonen 1988, Warner 1968, McDonald 1986). A large and meddlesome government was something to be suspicious of and few cities provided extensive public services. Government was run by (and services were often partially funded by) the wealthy – typically merchants. As Bridges (1984) explains of New York City in 1830s, "it is impossible to determine where government began and noblesse oblige (and the church) ended" (p72).

In most instances, services were handled by volunteers (e.g. fire brigades) or part-time, municipally funded workers (e.g. night watchmen); and while city budgets provided contributions toward these services, city responsibilities were largely focused on regulating access to urban activities (like city markets). But by the end of the 19th century, city governments began to adopt a new orientation toward public goods provision and city leadership began to shift away from wealthy merchants and toward career politicians. As a result, services came to be increasingly funded by city budgets, not charitable contributions. Monkkonen (1988) argues that city goals had been broadened by the 1890s to include:

> Protecting private property (firefighting); suppressing crime; controlling behavior in public areas; building and maintaining streets and sewerage systems; aiding the poor, schooling children and sometimes adults; funding public libraries; providing recreation and entertainment; supporting a minimal level of health; temporarily assisting all persons incapable of caring for themselves…; enforcing public morality; expending direct financial aid to private capital…; and constructing not-for-profit public buildings in which to house these activities (p218).

Historians do not agree on what caused the transition from the regulatory approach of antebellum governments to what Monkkonen calls the "service city" by the late 1800s. Yet, with one exception (Brown and Halaby 1984), scholars have not analyzed this development quantitatively in more than a handful of cities. Simply put, we lack systematic, quantitative knowledge of the factors that affected the development and expansion of city government at the turn of the 20th century when significant variation was present. In 1902, for example, the median per capita expenditure of local governments in cities over the size of 25,000 (n=160) was about $11, but the standard deviation was more than a third of that amount ($4). Some cities spent very little providing services for residents, others, a great deal. If city governments were once limited and weak, why did some choose to begin providing services for residents while others lagged behind?

The dominant paradigm is to understand the growth of city government as the necessary response to the negative externalities of increased population growth and density such as pollution, congestion, conflagration, crime, and disease (see for example Griffith 1927, Still 1948, Glaab and Brown 1967, Chudacoff 1975, Anderson 1977, Troesken 2004). Scholars have generally recognized that the capacity to fund such developments through taxation and debt varied widely across cities (Dilworth 2005, Cutler and Miller 2006, Monkkonen 1988).[38]

Some scholars argue that managing racial and ethnic diversity in growing, compact cities was an essential driver of the development of municipal government. In an analysis of city relief spending in 1929, Cybelle Fox (2012) argues that native-born Americans and social welfare workers sought to Americanize foreign-born populations by drawing them into the reach of government. Tebeau (2003) shows that the development and expansion of fire services was an

[38] Research indicates that prior to the advent of the municipal bond market, cities were largely unable to invest in large infrastructural development.

attempt to confiscate power from ethnic fire brigades, ensuring that firemen would be loyal to the city and not to their group. Similarly, Monkkonen (1988) argues that spending was a mechanism to manage conflict. As cities grew, he says, the bureaucracy of municipal government was invoked to manage conflict and Americanize newcomers as a substitute for small town interactions. In support of this thesis, Brown and Halaby (1984) find a substantial, positive relationship between expenditures and percent foreign born. But contrary to these arguments, Goldin and Katz (2008) show that community *homogeneity* was key in the expansion of free public schooling. A large literature linking diversity and limited public goods provision underscores this finding (Alesina et al. 1999, Poterba 1997, Vigdor 2004, Hopkins 2009, Habyarimana et al. 2007, 2009, Miguel and Gugerty 2005, Miguel 2004, Algan et al. 2011, Fearon and Laitin 1996). This leaves no clear prediction regarding the direction of the relationship between diversity and spending.

Several accounts emphasize demands made by emerging middle-class residents (Yearly 1970), as views regarding what it was the duty of government to provide evolved (Myrdal 1944). McDonald (1986) suggests that property owners in particular wanted good public services which led to high spending through debt. Others highlight the demands of newly minted professionals engaged in the private provision of services, who would benefit from public funding. Teachers pushed for public education; fire fighters pushed for fire forces (Katznelson and Weir 1985, Tebeau 2003). Along these same lines, Monkennen (1988) highlights the growing role of planners, real estate developers, and professional bureaucrats who helped to build the Progressive reform movement (see also Hays 1964, Bridges 1997, Tretter 2012 on Progressivism and growth).

City Spending Data

To provide a description of historical expenditure patterns, I use a new dataset built from a number of government sources that includes data from the turn of the century to the Second World War. Starting from 1902, the Bureau of the Census has been responsible for collecting data on the finances of local governments. With a few exceptions, the data have been collected annually for cities that meet a particular population threshold (which has varied over time). The Federal Reserve Archive (http://fraser.stlouisfed.org/) has digitized copies of the paper Census reports up until the year 1941, and I encoded a series of relevant variables from these digital reports at five year intervals.[39] Thus, I have fiscal data from 1902, 1907, 1912, 1917, 1923,[40] 1927, 1932, and 1937, as well as other governmental data from a number of early special Census reports.[41] I encoded socioeconomic data from the Census of Population and Housing in 1900, 1910, 1920, 1930, and 1940. In order to be able to analyze the diversity of the population, I gathered data on the country of origin for all of the foreign born residents in each city. Details on the coding of foreign born groups are included in the appendix. Linear interpolation was used to create intercensal estimates for all of the socioeconomic variables. In my largest sample, I have a total of 1,397 city-year observations, which includes data from 262 cities.

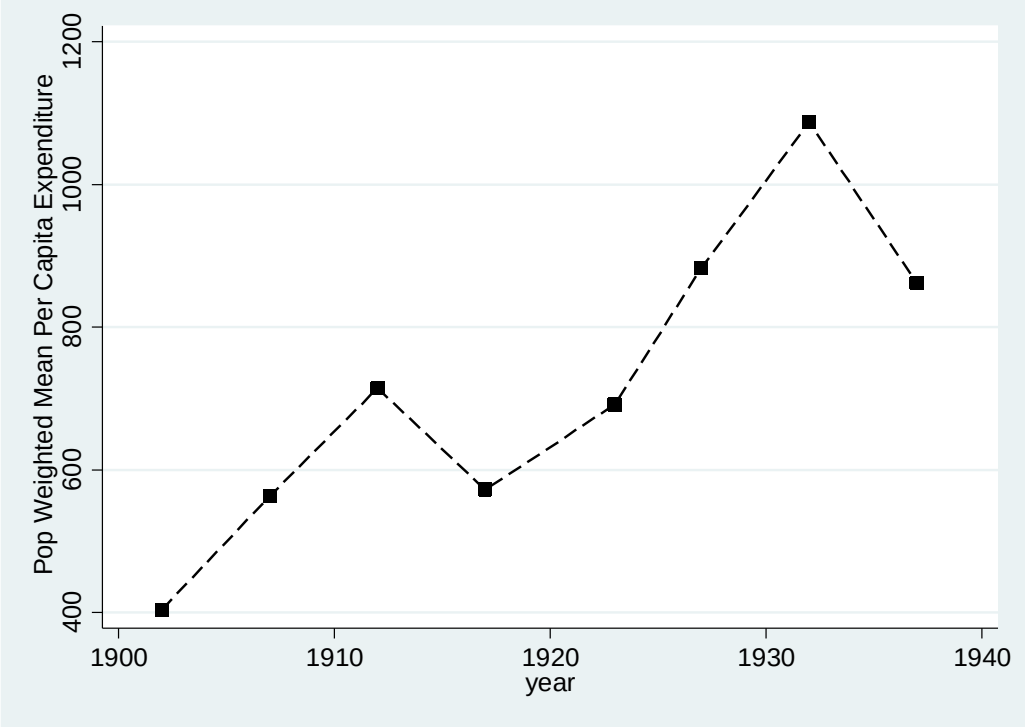
[39] The five year interval was selected to match the interval that the Census of Government used starting in 1952. From 1902-1903, the report was entitled "Statistics of Cities Having a Population of over 25,000." From 1904-1908, it was entitled "Statistics of Cities Having a Population of over 30,000." From 1909-1931, it was entitled "Financial Statistics of Cities Having a Population of over 30,000." From 1932-1941, it was entitled "Financial Statistics of Cities Having a Population of over 100,000." Collection of data on local governments was spotty between 1942 and 1952. The Census resumed regular collection of data at five year intervals starting in 1952.

[40] The report produced in 1922 was limited to very basic data and lacked many of the variables of interest. The 1923 report was used instead.

[41] These include the General Statistics of Cities: 1909: Including Statistics of Sewers and Sewage Disposal, Refuse Collection and Disposal, Street Cleaning, Dust Prevention, Highways, and the General Highway Service of Cities Having a Population of Over 30,000; Municipal Electric Fire-Alarm and Police-Patrol Signaling Systems: 1912; General Statistics of Cities: 1915: Including Statistics of Governmental Organizations, Police Departments, Liquor Traffic, and Municipally Owned Water Supply Systems, in Cities Having a Population of Over 30,000; General Statistics of Cities: 1916: Including Statistics of Parks, Playgrounds, Museums and Art Galleries, Zoological Collections, Music and Entertainments, Swimming Pools and Bathing Beaches, and Other Features of the Recreation Service.

I begin with an analysis of total *Per Capita City Expenditure* as the dependent variable.[42] All data are shown in real (2012) dollars to make comparison to the modern period more straightforward. As Figure 1.1 shows, development of municipal budgets was rapid over this time period. The graph displays the population-weighted mean of per capita total expenditure, plotted against time for all cities that had more than 30,000 residents in 1902. Tables 1.1 and 1.2 show inflation adjusted (but unweighted) mean per capita spending and revenue on various categories over the same time period.

Figure 1.1: Municipal Expenditures Per Capita
In 2012 dollars



[42] This measure includes all general expenses, expenditures on interest, and outlays for the municipal corporation.

Table 1.1: Municipal Budgets in the Early 20th Century
Per capita expenditures in 2012 dollars

year	Expenditure	General Expenditure	Outlays	Revenue	Taxes	Subventions
1902	$313.0		$ 114.2	$425.5	$269.3	$20.6
1907	$409.7	$279.2	$174.0	$418.6	$285.6	$24.4
1912	$562.0	$323.0	$207.9	$541.7	$364.9	$27.3
1917	$456.7	$274.7	$168.0	$408.8	$314.6	$22.1
1923	$587.0	$393.9	$205.2	$491.5	$431.2	$29.2
1927	$700.7	$460.9	$247.3	$586.7	$521.9	$32.2
1932	$868.7	$700.3	$173.3	$807.4	$710.8	$65.0
1937	$670.9	$682.2	$115.5	$704.0	$643.9	$126.9

Table 1.2: Municipal Spending in the Early 20th Century
Per capita expenditures in 2012 dollars

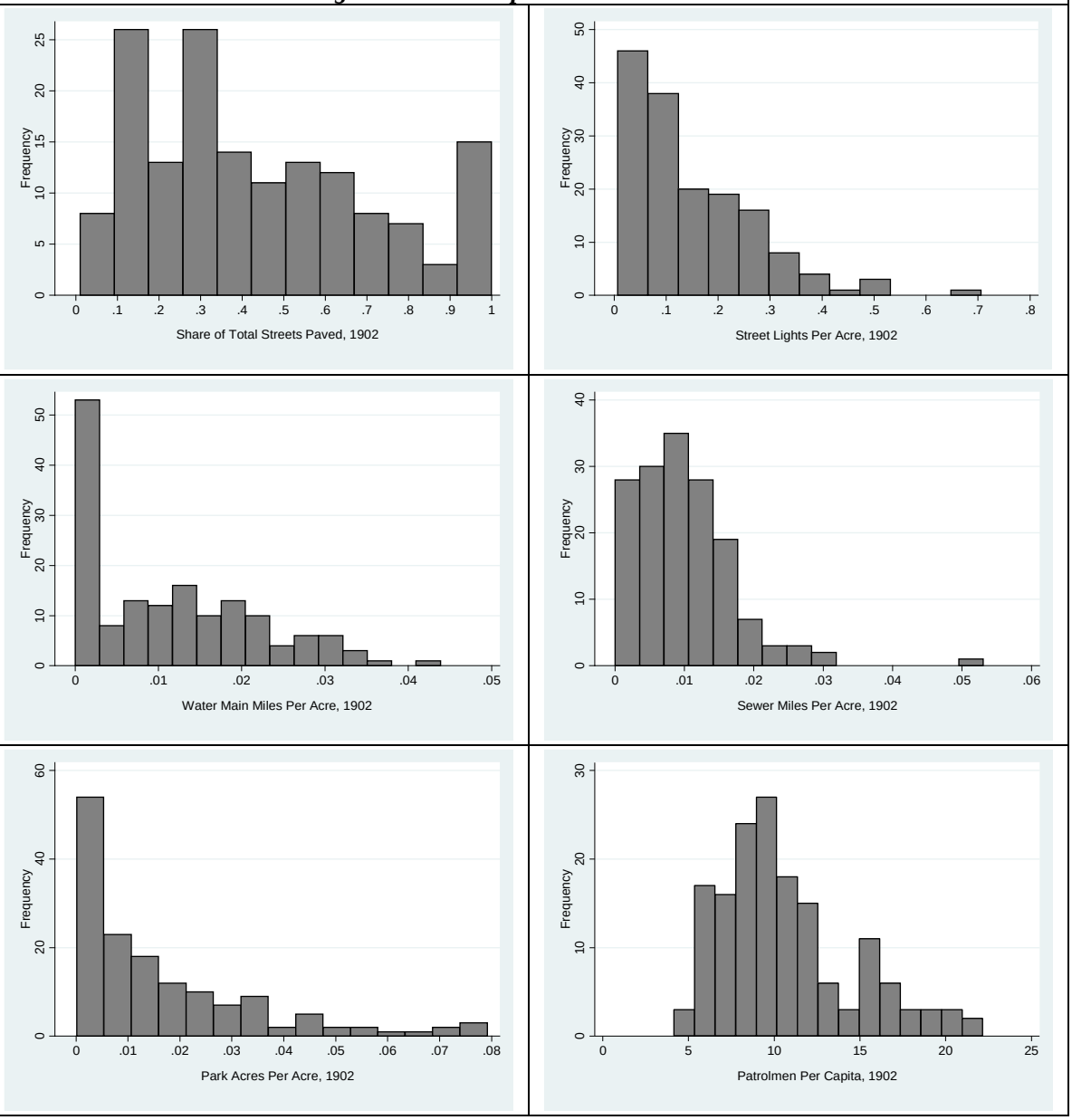
Year	Inspections	Refuse Collection	Sewers	Libraries	Police	Fire	Health	Highways	Recreation	Schools
1902	$1.3	$4.6	$3.7	$3.0	$28.9	$31.1	$4.8	$43.2	$6.5	$84.4
1907	$1.4	$6.7	$4.6	$4.4	$31.4	$35.4	$4.6	$38.7	$7.3	$96.0
1912	$2.2	$19.6	$5.0	$5.1	$33.3	$37.9	$6.2	$42.2	$10.1	$107.7
1917	$1.9	$16.1	$3.8	$4.0	$27.0	$29.2	$6.3	$32.6	$8.9	$97.5
1923	$2.4	$11.9	$5.1	$5.6	$36.1	$39.8	$9.0	$39.0	$11.9	$161.8
1927	$3.0	$14.1	$5.9	$6.7	$43.6	$45.2	$11.2	$43.4	$13.1	$202.3
1932	$3.9	$18.7	$7.7	$10.7	$63.2	$57.2	$17.7	$51.6	$22.3	$257.5
1937	$3.4	$16.1	$7.9	$10.7	$60.3	$53.5	$11.5	$43.4	$21.2	$233.0

The figure and tables reveal that during this period, city expenditures grew across the board. In every category, from sanitation to safety, from health to highways, American cities became modern service providers. Spending slid back during the time of the First World War and the Great Depression, but otherwise followed a steep upward trajectory. Over the next 70 years, growth continued. In 2012, per capita spending was literally 10 times what it had been in 1902. Yet, even at the start of the period, growth was uneven.

Figure 1.2 shows histograms of a number of different public goods that were provided by cities in 1902, including the share of total street miles that were paved, the number of street lights per acre, water main miles per acre, sewer miles per acre, park acres per acre, and

patrolmen per capita. All of the distributions are widely spread. Clearly, significant variation existed.

Figure 1.2: Municipal Public Goods 1902



To analyze the correlates of expenditure, I regress the natural log of inflation adjusted *Expenditures Per Capita* on several variables intended to capture explanations offered in the historical literature. Many scholars have argued that cities responded to pressing needs as they arose. For instance, Glaab and Brown (1967) argue that industrialization and population growth generated demands that were fulfilled by city government. While my dependent variable is measured as per capita spending, it is still possible that large and/or dense cities may have required higher levels of spending (if, for example, fires or diseases were more likely to spread in such places). Monkkonen (1988) argues that the need for social control through bureaucratization was greatest in large cities. Alternatively, large cities may have benefitted from returns to scale, and therefore may have been able to provide services for a lower cost. To test for these possibilities, I include a measure of the *Total Population* (logged) and *Density* (total population divided by total acres).

The analyses also include two different measures of diversity. The first is the share of all residents that were classified as *Nonwhite* by the Census of Population and Housing. During this period, racial categorization was in flux (Roediger 2005) and the determination of race was made by Census takers (Nobles 2000). However, generally speaking, the *Nonwhite* category included Blacks, Asians and Asian Americans, Native Americans, and sometimes Mexican/Latin Americans. Persons of mixed race were typically identified as nonwhite.

The second measure of diversity is a Herfindahl Index:

$$Diversity = 1 - \sum_{f=1}^{F} \pi_f^2$$

where, π_f is the population share of the foreign-born group *f* and F is the total number of foreign-born groups. There were 52 different foreign-born groups recorded by the Census during this

period (listed in the appendix), and the resulting diversity index ranges from a low of 0.23 to 0.94, with a mean of 0.84.[43] This illustrates that the foreign-born population in the United States was extremely diverse.

As explained above, property owners were among the most supportive of investing in new services (McDonald 1986). However, scholars also report a general tendency among the populace to rail against high taxes and profligate spending of city governments in the late 19th and early 20th centuries (Bridges 1984). According to Monkkonen (1988), this belief was particularly pronounced among property owners. To investigate the role of support for spending among owners, I include the proportion of housing units occupied by *Home Owners*. To measure the wealth of the community I include the *Assessed Value* of all property in the city. McDonald (1986) provides compelling evidence that this measure accurately captures the level of economic development in the city – which should correlate positively with ability to fund city services.[44] Finally, to capture the argument that the development of city services was driven by the emerging professional class (including land developers and planners), I add the share of adults employed as *Professionals*.[45] Because I have missing data on a number of variables, I begin with a presentation of the results using only density and population as independent variables. I then add the remaining variables iteratively. Summary statistics for all variables are in appendix Table A1.1.

[43] Making these categories comparable across censuses required some recoding. For instance, in 1930 and 1940, Irish immigrants were separated by Northern and Southern Ireland. I combined these categories to make the data comparable to the 1900, 1910, and 1920 censuses, which included only one category for Ireland.
[44] However, McDonald (1986) finds that when assessed value rose in San Francisco, politicians tended to lower tax rates, perhaps resulting in little difference in expenditure.
[45] The other occupational categories coded by the Census during this period were trade, manufacturing, domestic work, and agriculture. In 1900, the category professionals included actors, architects, artists, clergymen, dentists, electricians, engineers and surveyors, journalists, lawyers, literary and scientific persons, musicians, government officials, physicians, teachers, and other professionals.

These variables are admittedly insufficient to capture all of the important differences across cities during this period. So, rather than attempt to explain variation across cities, I pursue a more modest goal – to describe variation within cities over time. To do so requires that I use a city fixed effects model for the analysis. This strategy overwhelms much of the variation present in the data, but it allows for a more precise estimate of the effect of each of these contextual variables on spending. Table 1.3 presents the results.

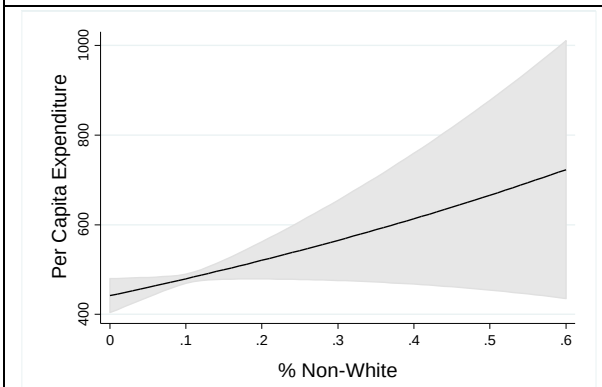
Table 1.3: Factors Affecting City Wide Expenditure

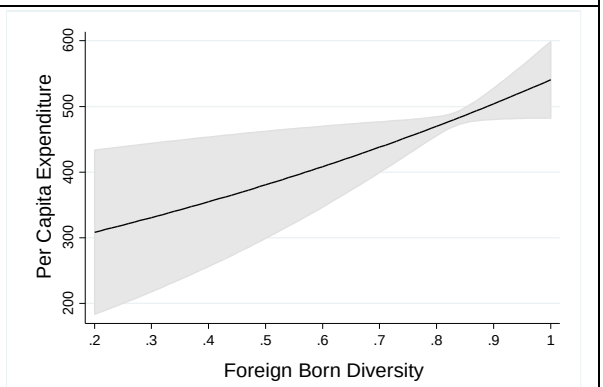
	Logged Per Capita Expenditure								
	β	Std. Err	P>|t|	β	Std. Err	P>|t|	β	Std. Err	P>|t|
Population (log)	0.520	0.037	0.000	0.329	0.047	0.000	0.263	0.051	0.000
Density	0.016	0.004	0.000	0.013	0.004	0.001	0.01	0.004	0.011
% Nonwhite				0.838	0.412	0.042	0.821	0.409	0.045
Foreign Born Diversity				0.893	0.322	0.006	0.702	0.326	0.031
Assessed Value ($100 mill)				0.005	0.003	0.104	0.005	0.003	0.138
% Home Owners				2.672	0.385	0.000	2.030	0.423	0.000
% Professionals							3.197	0.934	0.001
Constant	0.045	0.421	0.961	0.332	0.481	0.49	1.275	0.559	0.023
N	1,397			1051			1040		
Number of Cities	262			173			169		
R^2 within	0.175			0.301			0.315		
R^2 between	0.064			0.077			0.112		
ρ	0.681			0.606			0.567		

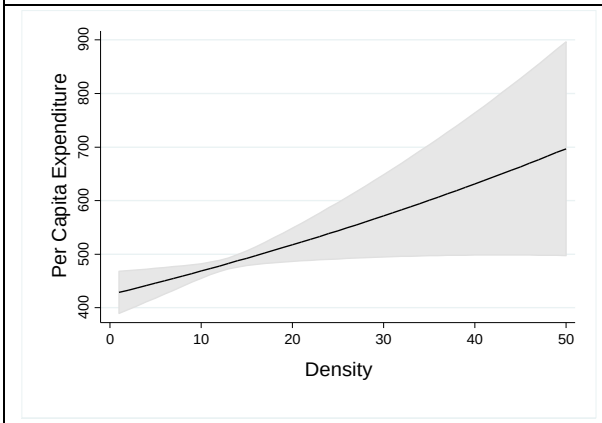
Note: Fixed effect for cities included, but not presented

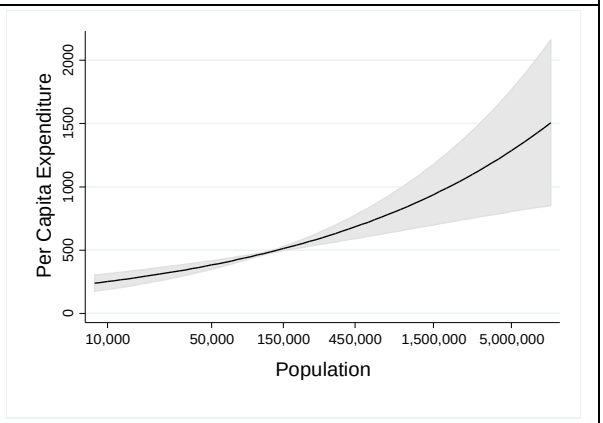
The regression reveals that the factors identified by historical research *do* correlate with expenditures. Cities that were more diverse (either having more nonwhite residents or a diverse foreign-born population from many different places) spent more money. Those places with large, dense populations witnessed higher spending per resident. In an alternate analysis, I add the number of fires per capita that the city experienced in 1902 and 1907. This variable is powerful. Increasing from the 25th to the 75th percentile (from 3 to 5 fires per 1000 people each year), increased spending by $50 per resident. Cities were clearly responding to the negative externalities associated with urbanization. Finally, cities with more capacity and demand (higher property values, more homeowners, and more professionals) also had larger budgets. These results are shown graphically in Figure 1.4. Figures show the marginal effect of each independent variable, holding all other variables at their mean value.

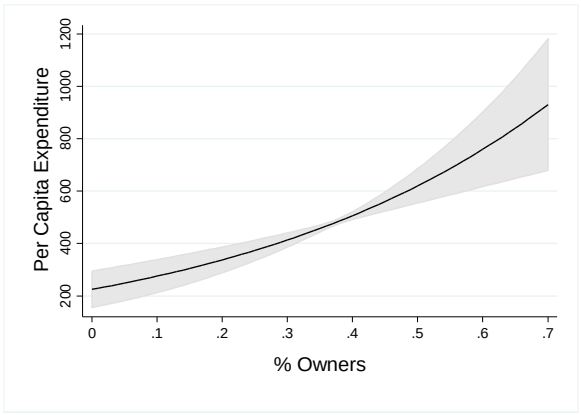
Figure 1.4: Factors Related to Expenditure in Cities, 1902-1937

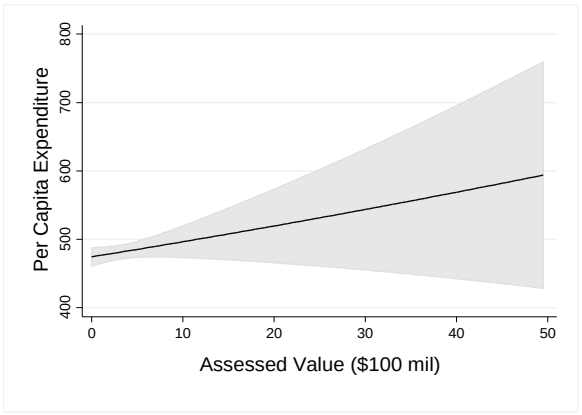


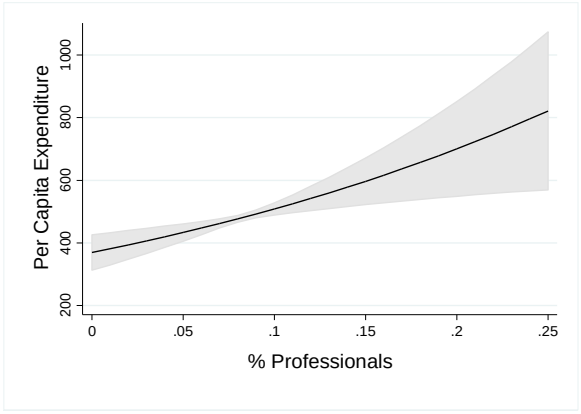












In this book, I argue that white, homeowners sought to institutionalize the residential segregation of poor and minority residents in order to protect their property values and control the distribution of public goods. They were supported in this pursuit by land-oriented businesses. The pattern of relationships presented in Table 1.1 and Figure 1.4 begin to explain this impetus – particularly the positive correlation between property ownership, assessed value, percent professionals, and municipal expenditures. Holding all other variables at their means, a city that was in the 25th percentile of home-owning, assessed value, and professionals (30% owners, $43 million in assessed value, 6% professionals) spent about $378 per resident. A city in the 75th percentile of all three measures (45% owners, $218 million in assessed value, 10% professionals) spent about $588 per person.

These relationships were circular. Local service provision was understood to increase the value of property. It was for this reason that the property tax was thought to be the most appropriate avenue for supporting local expenditures, as owners would be able to "recoup at least part of the levies in the form of higher real property worth" (Benson and O'Halloran 1987). Thus, property owners sought high levels of municipal services, which were expected to bring both direct benefits (from having access to clean water, paved streets, reliable fire-fighting, etc.)

and indirect benefits through increases in property values. In turn, cities expected owners to fund public goods. Yet, even in the early 20th century, owners were prone to believing that city governments were wasteful and they often opposed increases in taxes. Residents wanted high quality services, but were loath to pay for them.

Property owners' orientation toward both government and services was related to the emerging understanding of *who* should benefit from publicly-funded improvements (Myrdal 1944). The cities with the fastest growing service provision were also cities with high levels of racial and ethnic diversity. As Tretter (2012) explains, growth in municipal service provision operated "within a framework of white supremacy" (p10). Controlling who accessed the new benefits was of utmost importance. During this period, the vast majority of blacks, Asians, and Latinos lived in places where they lacked the right to vote; and everywhere, foreign-born residents had to be naturalized before participating (Keyssar 2000). Thus, the preferences of these groups hardly played a direct role in formation municipal policy. A white voter living in Birmingham in 1902 could be certain that no matter how much money the local government raised in taxes, black residents would have little say in how that money was spent. The same was true for a San Franciscan thinking about his Chinese neighbors and for an El Paso resident concerned with Mexicans in his city (Myrdal 1944, Chen 2000, Fox 2012). However, most public goods provided by cities were not targetable to individuals.[46]

When municipal governments provide streetlights and sewers, even those ineligible to vote benefit from these services. But, residential segregation could limit equality of access. Segregation made targeting services – at least to groups, if not individuals – easier. As will be

[46] Municipal jobs, particularly when distributed as patronage, are an exception to this statement. However, despite early accounts to the contrary, the presence of political machines actually depressed spending (Trounstine 2008, Fox 2010, Brown and Halaby 1984). Thus, it appears to be the case that growth in municipal governments has never really been driven by the logic of patronage.

shown in detail in the chapters to come, segregation allowed city governments to collect taxes from poor and minority residents, but underprovide services to them – thereby holding down the total tax bill. Oates (1981) explains that for many important local services such as education and public safety, the characteristics of residents are more important in determining the quality of the public good output than budgetary contributions. Thus, the generation of race and class segregation via policy enacted by local governments (such as zoning or urban renewal), was, in and of itself, a mechanism to improve municipal service provision. Segregation also ensured that the presence of poor and minority neighbors would not threaten property values. As the chapters ahead will show, it was in those places where city spending was high that segregation was institutionalized through local public policy; such institutionalization was pursued most adamantly by white owners and developers of property.

Explaining and Measuring Segregation

The high level of residential segregation in America has been tremendously well-documented (see Charles 2003, Ross 2008, and Boustan 2012 for extensive literature reviews). A smaller, though still well-developed, body of literature is focused on class segregation (see Bischoff and Reardon 2013 and Jargowsky 1996 for reviews). The debate over the fundamental causes of segregation is extensive and nuanced. Scholars have focused on two primary explanations: individual preferences for same race/income neighbors (particularly among whites and the wealthy) and market explanations (e.g. differences in the socioeconomic status of different racial groups and the ability to pay for quality housing/transportation among the poor).

Research on racial segregation largely concludes that the driving force behind residential separation is white preferences for same race neighbors (Cutler et al. 1999, Bayer, Ferreira, and

McMillian 2007, Charles 2006).[47] Boustan (2010) finds that in northern metropolitan areas, between 1940 and 1970, every black arrival from the South was associated with 2.7 white departures to the suburbs. Several scholars show that differences in socioeconomic characteristics such as education, income, wealth, and family structure cannot fully account for segregated living patterns for blacks, but *does* explain a fair amount of the segregation of Latinos and Asians (Bayer et al. 2004, Erbe 1975, Massey and Denton 1987 and 1993, Iceland and Wilkes 2006). Logan summarizes by explaining that racial segregation for blacks is due to the inability to "translate higher income…into residential mobility" (Logan 2011 p15).

Several scholars find that income inequality is an important driver of economic segregation (Bischoff and Reardon 2013, Watson 2009). Others concentrate on selection. Alesina et al. (2004) show that people are willing to give up economies of scale in order to avoid being in a jurisdiction with significant income heterogeneity and Bayer, Ferreira, and McMillian (2007) reveal that households self-segregate on the basis of education.

The links between race and class segregation also form a considerable literature. Some scholars like Denton and Massey (1991), Krysan et al. (2008), and Emerson, Chai, and Yancey (2001) find that whites avoid black neighbors *because* they are black, while others like Ellen (2000), Yinger (1997), Taub et al. (1984), and Harris (1999) argue that whites use black neighbors as a proxy for neighborhood quality. That is, whites do not avoid black neighbors per se, but rather choose what they perceive to be better neighborhood amenities or neighbor characteristics like wealth.

With only a handful of exceptions (e.g. Rothwell 2011, Pendall 2000), quantitative research on the causes of segregation ignores the political context in which it occurs. Local

[47] A small amount of scholarship shows that black preferences for same race neighbors contributes to segregation (Bayer, Ferreira, and McMillan 2007, Fossett 2006)

policies and political battles are crucial for understanding *how* white/wealthy preferences for homogeneity and socioeconomic inequalities are translated into residential patterns. To be sure, scholars have extensively documented the *private* mechanisms by which these factors affect segregation (e.g. via racial steering, mortgage discrimination, and willingness to pay for homogenous neighborhoods). But even private mechanisms may be shaped by local policies and political concerns. For example, I argue that white beliefs about available amenities in poor and minority neighborhoods are, in part, the product of under provision of public goods early in the 20th century. Cutler et al. (1999) find that these beliefs contribute to whites' willingness to pay higher housing prices in whiter neighborhoods. In the next section, I provide the first piece of evidence for this argument. Segregation is correlated with city expenditures – places that provide more services are also more segregated.

There are many different ways to measure segregation (e.g. the degree to which groups are disproportionately distributed across geographic space). Indices of segregation are typically correlated with each other, but capture different theoretical dimensions of separation and so, measure different things (Massey and Denton 1988). The two most commonly used measures are the index of dissimilarity and the index of isolation which can be intuitively interpreted respectively as the proportion of a racial group that would need to move neighborhoods in order to generate an even racial distribution given the racial makeup of the larger community, and the racial makeup of the neighborhood in which the typical member of the racial group lives. While these are obviously meaningful dimensions of segregation, neither measure includes the most relevant information from a political perspective. In politics, what matters is not just how individuals from different racial groups are distributed across neighborhoods, but also how large each racial group is relative to others and how big of an impact each neighborhood might have

on the vote. That is, we need a measure that weights diversity by group size and weights evenness by population size. The *H* index developed by Theil (1972) meets these criteria.

Theil's *H* Index measures the difference between the diversity of the city and the weighted average diversity of individual neighborhoods. Diversity scores for each neighborhood and the city as a whole are influenced by the relative size of racial groups, while the overall index is influenced by the relative size of each neighborhood, giving more weight to larger than to smaller places. Both types of weighting are key to understanding the political implications of segregation. We should expect the effect of segregation to be most pronounced when minority groups are unevenly dispersed across geographic units *and* represent a substantial share of the population.

Theil's *H* has a number of other useful qualities. Importantly, for understanding city politics, Theil's *H* can be calculated for more than two groups at a time (unlike either the dissimilarity or isolation indices). Additionally, it is the only index that obeys the principle of transfers in the multi-group case - the index declines when a minority resident (theoretically) moves to a neighborhood with fewer minority residents (Reardon and Firebaugh 2002). Finally, as will be discussed in the next section, Thiel's *H* is additive and can also be aggregated to higher levels or decomposed into its constituent parts.

Theil's *H* Index is built from Theil's entropy score which is a measure of diversity itself

$$E = \sum_{r=1}^{R} (\pi_r) \ln \frac{1}{\pi_r}$$

where π_r represents the proportion of the population in racial group r (or class group r if the index is measuring class segregation). The higher the entropy score, the more diverse an area

is.[48] The score ranges between 0 and the natural log of the total number of groups *R*. It is maximized when individuals are evenly distributed among the different racial groups (e.g. when

$$\pi_r = \frac{1}{R} \text{ for all } r$$

).[49] Entropy is calculated for each neighborhood individually and for the city as a whole.

The *H* Index measures the degree to which the diversity in each neighborhood differs from the diversity of the city as a whole, expressed as a fraction of the city's total diversity and weighted by the neighborhood's share of the total population.

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents total population of neighborhood *n* or city *c* and E is the entropy of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city, and 1 where all neighborhoods contain only one group.[50] This *H* Index serves as a key outcome to be explained throughout the book.

The dataset that I constructed to measure segregation is built from a number of different sources. The calculation of the *H* Index requires data on population characteristics at the sub-city level. Cutler et al. (1999) digitized sub-city demographics on race and immigration for 178 different cities from the 1890- 1950 Censuses. To this, I add available data that I encoded on homeownership from the 1900 Census and data from the Elizabeth Mullen Bogue files (1975) on

[48] Where any group's share of the population is 0, the natural log is set to zero, as is the convention in the literature (Iceland 2004).
[49] A scatterplot relating a white/nonwhite calculation of E to percent white is included in appendix Figure A1.1.
[50] In all analyses, neighborhoods are represented by Census tracts, which are relatively stable, contiguous geographic areas containing approximately 4,000 people. Most studies of segregation (e.g. Massey and Denton 1993) use Census tracts as a proxy for neighborhood (although this is not without debate, see for instance Logan et al. 2015).

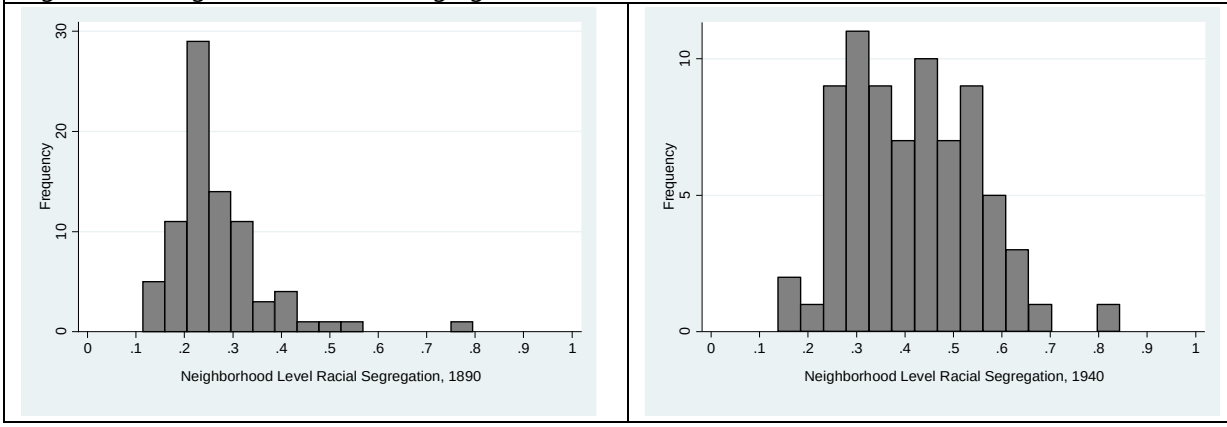
homeownership from the 1940 census.[51] For the 1970-2000 Censuses, I rely on a product developed by GeoLytics called the Neighborhood Change Database (NCDB). The NCDB matches and normalizes Census tract boundaries for each Census year, allowing for direct comparison in demographic changes across time. Finally, I add data from the 2007-2011 American Community Survey. These data allow me to create a panel dataset measuring segregation at the Census-tract level for cities and metropolitan areas for more than 100 years.

Figure 1.4 plots the distribution of racial segregation scores in 1890 and 1940, using data for the 80 cities with populations of at least 25,000 and with at least 1,000 blacks as of the 1890 Census.[52] In 1890, racial segregation patterns were similar from place to place, and generally fairly moderate – although higher than some historical analyses indicate (Cutler et al. 1999). Both features had changed substantially by 1940.

[51] The data from 1900-1940 are collected at the ward level (political units for electing city council members). Starting in 1940, the Census published tract-level data for some cities. Wards tend to be larger in area than tracts and therefore, suggest a smaller value of the segregation index without actually representing a lower level of segregation. To account for this, I adjust all ward-level estimates by a correction factor calculated using a set of 47 cities that reported both ward and tract-level data in 1940.

[52] For all figures presented in this chapter, the two groups used to calculate the *H* index are whites and all others for years 1890-1970. For 1980-2011, the groups are non-Hispanic whites and all others. Throughout the book, I calculate the *H* Index by tract-city-county-msa (Metropolitan Statistical Area). This means that cities which cross county lines end up with multiple observations. This is necessary because Census tracts are nested within counties – not cities. When presenting any analysis at the city level, I use the observation representing the largest share of the city population.

Figure 1.4: Neighborhood Racial Segregation in 1890 and 1940



Note: The white/nonwhite *H* index for 1890 is calculated using wards as the base population unit with an additional correction factor to make the data comparable to tract-level estimates. The *H* Index for 1940 is calculated at the tract level where available and at the ward level otherwise. Data provided by Cutler et al. (1999) and Bogue (1975).

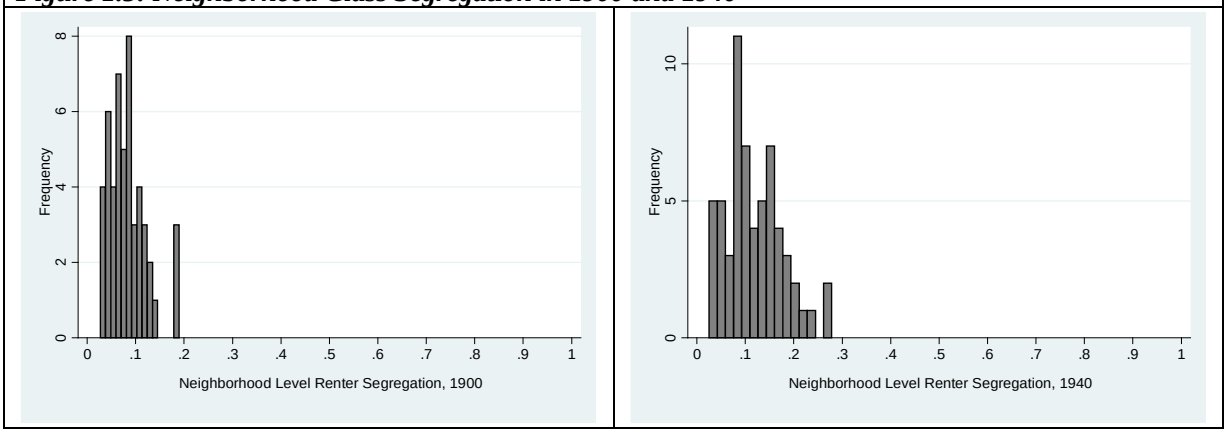
In all but a handful of cases, neighborhood-level racial segregation rose between 1890 and 1940 – on average rising 0.15, a change of about 65%. But the standard deviation is large at 0.13; some cities segregated much more intensely than others. There are many ways to consider measuring class segregation. Throughout the book I use two measures – the distribution of renters versus homeowners, and the concentration of households in the top income threshold.[53] The correlation between owner and wealth segregation is about 0.60. I rely primarily on the former measure for two reasons. First, it is available for the entire time period. More importantly, the existing scholarship indicates that it is property ownership – not wealth – which is the more important driver of local political participation and preferences (Fischel 2000, Oliver and Ha 2007). The downside of this measure is that, at an aggregate level, it is very resistant to

[53] The Census reports income categorically, not continuously; wealthy refers to the number of families in each Census tract with incomes above particular thresholds for each Census year. I use family as opposed to household income because the NCDB does not report household income at the tract level. The thresholds were determined by calculating the average family income for all Census tracts in the United States for each Census year. The wealthy threshold represents the income bin with a starting point closest to the 90th percentile of this distribution. The thresholds for each census year are: $35,000 for 1980, $75,000 for 1990, $100,000 for 2000, and $150,000 for 2011. All families with this amount of income or more are categorized as wealthy. Census tracts range from 0 to 100% wealthy, with a mean of 18%, a median of 13%, and a standard deviation of 16%.

change as the housing stock changes more slowly than demographics. Wealth segregation is a more straightforward measure of the residential divisions along socioeconomic lines, but it is only available starting with the 1970 Census and is less directly affected by city policy.

To demonstrate change over time, Figure 1.5 presents data on the renter/homeowner distribution within cities. This figure reveals that class segregation started off much lower and was more consistent from city to city as compared to racial segregation, and increased a small amount (0.037) between 1900 and 1940.

Figure 1.5: Neighborhood Class Segregation in 1900 and 1940



To determine how segregation correlates with expenditure in the pre-war period, I add to the segregation dataset the measure of *Logged Expenditures Per Capita* described in the previous section. Because segregation data are measured every decade, and expenditures in years ending in 2 and 7, I interpolate spending data. I then lag spending by five years under the assumption that demographic sorting takes time to respond to budgets. I regress *Racial Segregation* and *Renter Segregation* on the lagged *Expenditures* variable. As in the previous section, I add fixed effects for cities. This fixed effect model analyzes the relationship between lagged expenditures and racial segregation over time within cities. This accounts for variation across cities on all other dimensions that might affect segregation and spending.

Table 1.4: Correlations Between Spending and Segregation

	Racial Segregation			Renter Segregation		
	β	Std. Err	P>|t|	β	Std. Err	P>|t|
Expend. Per Capita, 5 year lag (logged)	0.100	0.010	0.000	0.026	0.003	0.000
Constant	-0.238	0.059	0.000	-0.052	0.018	0.005
N	368			179		
Number of Cities	118			56		
R^2 within	0.292			0.383		
R^2 between	0.020			0.010		
ρ	0.802			0.931		

Note: Fixed effect for cities included, but not presented.

The results, presented in Table 1.4, indicate a positive correlation between spending and segregation. The R^2 suggests that about 30 to 40% of the variation in city segregation levels can be explained by variation in the budget. Places with larger budgets were more segregated five years later compared to cities with smaller budgets up until the Second World War. For a host of reasons, this relationship would change going forward.

Suburbanization – Another Form of Segregation

Teaford (1979) argues that two conflicting forces animated city development in the late 19th and early 20th century. On the one hand, socioeconomic diversity generated an impetus for separation. As early as the mid-1800s, "the urban population was resolving itself into separate geographic spheres – factory zones, ethnic neighborhoods, upper-middle-class retreats, race track havens – and each zone sought local self-government as a means of protecting its own particular interests" (Teaford 1979, p23). This separation, Teaford shows, led to the explosion of newly incorporated municipalities. But, over the course of the next 50 years, many of these tiny new cities consolidated and/or were annexed into larger central cities for one primary reason: the provision of city services. Prior to 1900, suburban governments were simply unable to provide the quality of sewers, clean water, paved streets, uniformed police forces, and fire-fighting that

was available in the central city. As a result, as cities became more diverse, the forces of separation pulled people into different neighborhoods, but not into different cities.

However, in the period following the Second World War, America began to suburbanize rapidly (Rappaport 2005). Scholars have detailed the role that automobile accessibility (Glaeser, Kahn, and Rappaport 2008), highway construction (Nall forthcoming), federal programs encouraging home ownership (Jackson 1985), changes in the building industry, and rising incomes (Margo 1992) played in the growth of suburbs. The vast majority of people who arrived in the bucolic, grassy, neighborhoods filled with single-family homes were whites with incomes slightly (although not dramatically) higher than the median income of the central city (Cutler et al. 1999, Winsberg 1989). By about 1940, many larger suburbs were able to compete with central city service provision, thus increasing the attractiveness among residents, industry, and business to move away from the center. As Teaford (1979) explains, "while the forces encouraging unity were weakening, the forces of separatism and disunion remained powerful" (p84). Thus, in the middle of the century, central cities stopped growing politically and suburbs arose as powerful actors in the metropolitan universe (Teaford 1979, Danielson 1976, Miller 1981, Burns 1994). In 1970, more than half of all metropolitan area populations lived outside of the central city; a figure that would grow to two-thirds over the next 30 years. The rise of suburbs decoupled residential spaces from job spaces, and encouraged suburban residents to prioritize neighborhood amenities and property values in political decision making (Teaford 1979, Fischel 2004).

As they moved outside of the central city, suburbanites sought to protect their investments (high quality public goods and property values) in much the same way as their predecessors had – by institutionalizing segregation through public policies like land use

planning and zoning. Thus, the impetus toward separation in the latter half of the 20th century played out across, rather than within, city lines. The level of segregation is of crucial importance to politics. When cities are not segregated by neighborhood, district representation ensures that all residents within a particular location are likely to be provided similar services. When a district councilor wins a public park for his neighborhood all those who live nearby benefit. As the level of segregation shifts from blocks to neighborhoods, residents are more likely to lose representation. Still though, when segregation occurs across neighborhoods within cities, it is possible for residents of segregated neighborhoods to affect the delivery of municipal services through the political process. If a heavily minority neighborhood lacks a public park, residents from this neighborhood might mobilize to try to elect a mayor or city council member who is responsive to their demands. But when segregation occurs across cities, heavily minority cities have no ability to affect the distribution of public goods from neighboring white towns.

To understand how segregation patterns have changed over time, I compiled a measure of segregation that accounts for segregation both within cities and across them. In order to do this, I build on the measure of segregation presented in the previous section – Thiel's *H* Index. Theil's *H* is suited to this purpose because it is perfectly additive for nested geographies (Reardon and Firebaugh 2002, C.S. Fischer et al. 2004). In my case, census tracts are nested within cities, and cities are nested within metropolitan areas. Residents can be segregated in two ways – across neighborhoods within cities, or across cities within metropolitan areas. My measure combines these two types of segregation.

As explained above, the *H* Index measures the degree to which the diversity (*E*) of subunits differs from the diversity of a larger unit. For each Census year, I calculate *H* Indices at the two levels that are of interest – within cities and across cities. Respectively, these measure

the extent to which Census tract diversity differs from city diversity (H_{c_t}) and the extent to which city diversity differs from metropolitan area diversity (H_{m_c}). [54]

$$H_{c_t} = \sum_{t=1}^{T} \frac{P_t}{P_c}\left(\frac{E_c - E_t}{E_c}\right)$$

$$H_{m_c} = \sum_{c=1}^{C} \frac{P_c}{P_m}\left(\frac{E_m - E_c}{E_m}\right)$$

Where *P* represents total population of the tract *t*, city *c*, or metropolitan area *m*, and *E* represents the entropy of the geography ($E = \sum_{r=1}^{R}(\pi_r)\ln\frac{1}{\pi_r}$).

I combine the two indices to produce a total *H* Index for the metro area calculated at the tract level, H_{m_t}.

$$H_{m_t} = \sum_{t=1}^{T} \frac{P_t}{P_m}\left(\frac{E_m - E_t}{E_m}\right) = H_{m_c} + \sum_{c=1}^{C}\left(\frac{P_c}{P_m}\right)\left(\frac{E_c}{E_m}\right)H_{c_t}$$

To illustrate the two levels of segregation, Figure 1.6 provides images from a map of the population developed by Dustin Cable for the Weldon Cooper Center for Public Service at the University of Virginia. The map includes one dot for each person in the United States as of the 2010 Census, color coded by race (blue for white, green for African American, red for Asian, and orange for Latinos). [55]

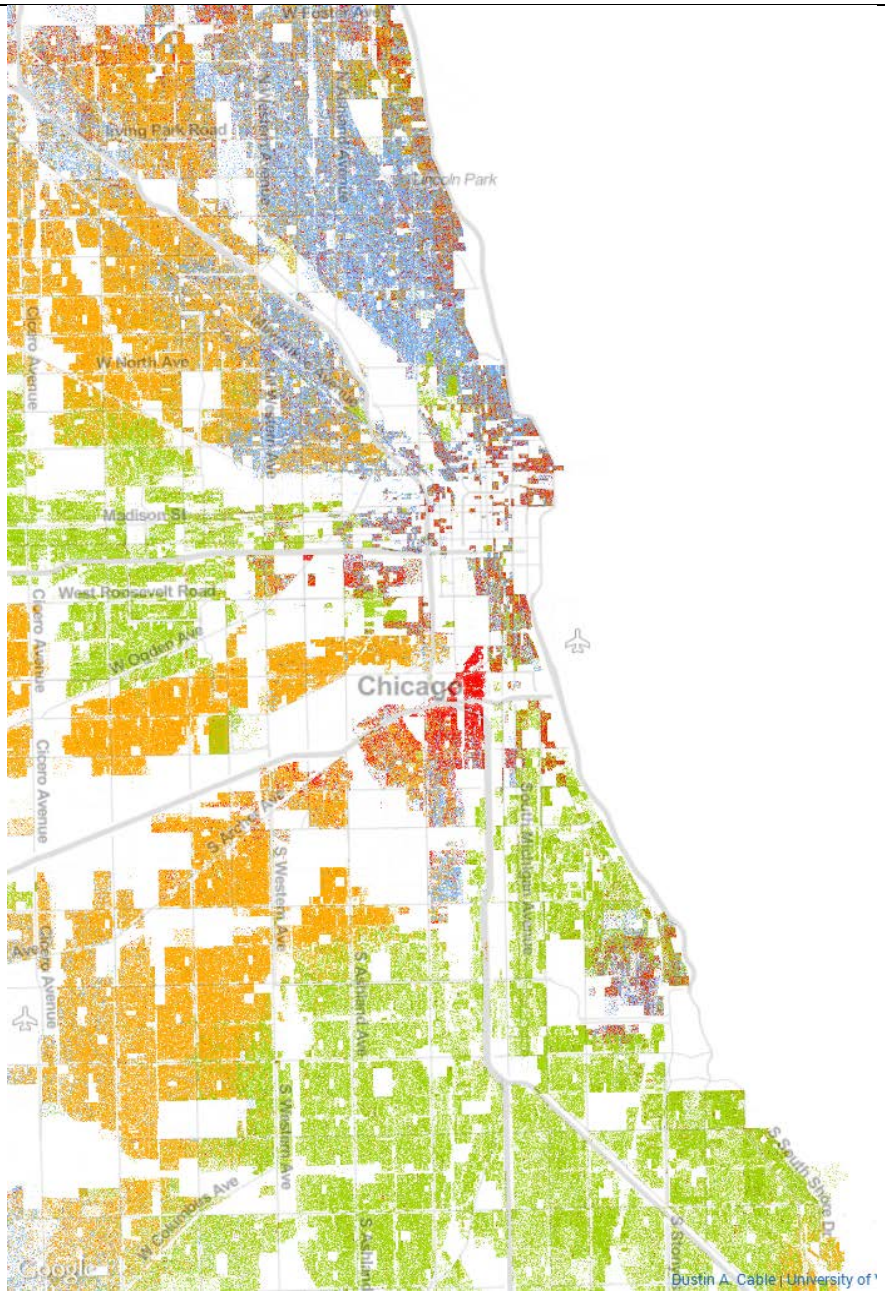
[54] Census tracts are perfectly nested within states and counties. However, in some cases, tracts cross city lines. In these cases, GeoLytics assigned the tract to the city containing the largest share of the tract population. In 2011, tracts are weighted by the share of population contained in each city. Observations are unique when defined by year, tract, city, county, and metropolitan area. Tracts located in unincorporated areas within a metropolitan area (even if they are denoted as places by the Census) are combined as a single unincorporated unit. Tracts outside of metropolitan areas are not included in the analysis. I use Metropolitan Statistical Areas and where possible, Primary Metropolitan Statistical Areas, as the highest level of aggregation (not Consolidated Metropolitan Statistical Areas which are much larger).

[55] Available at http://demographics.coopercenter.org/DotMap/index.html.

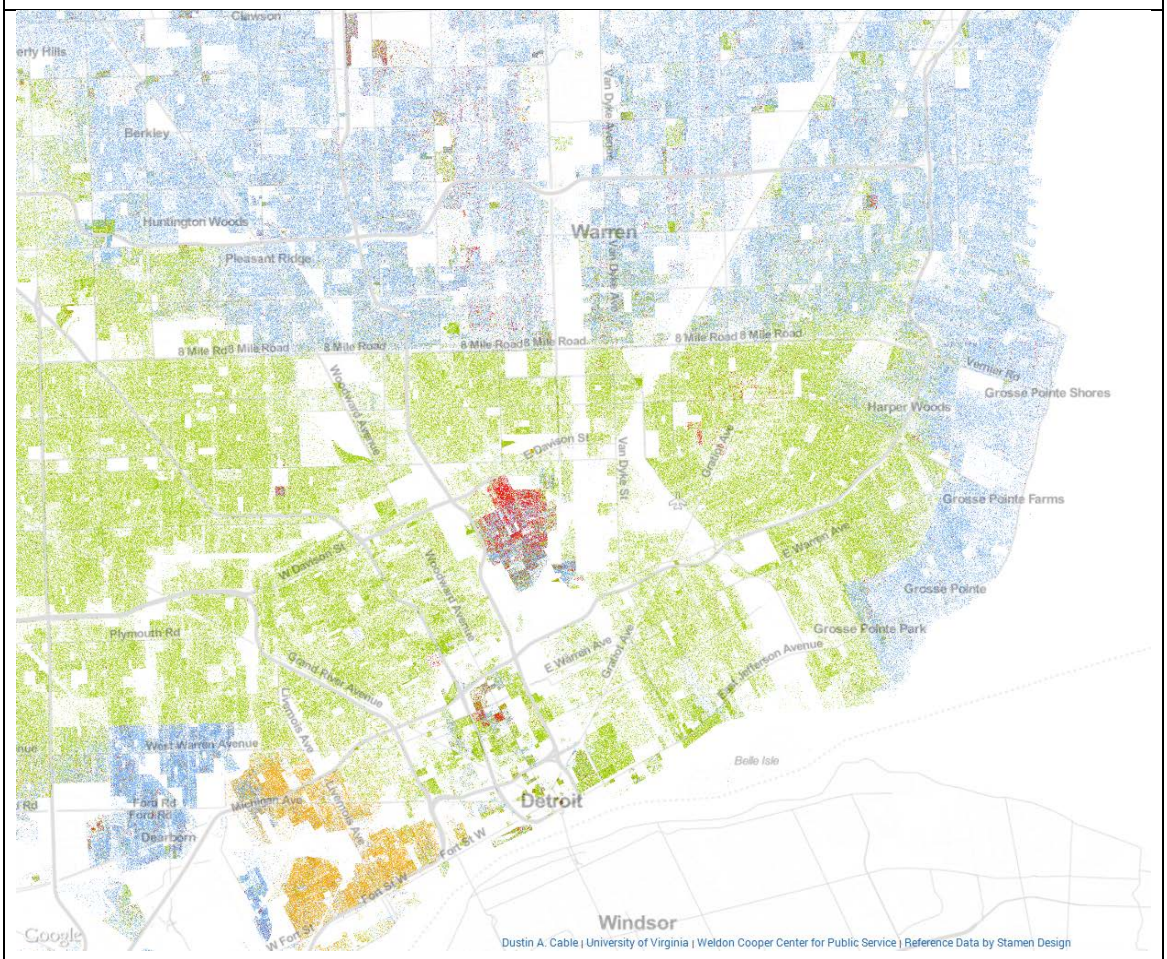
The upper panel shows Chicago, Illinois – a city in which whites are segregated from nonwhites in different neighborhoods (indicating a high amount of segregation across tracts within the city, H_{c_t}). The bottom panel shows a section of the Detroit, Michigan metropolitan area where racial sorting is much more prevalent *across* city lines as opposed to within them (indicating a high value of H_{m_c}).

Figure 1.6: Segregation Within City vs. Across Cities, 2010

Chicago, Illinois: Segregation within a City



Detroit, Michigan: Segregation Across City Lines



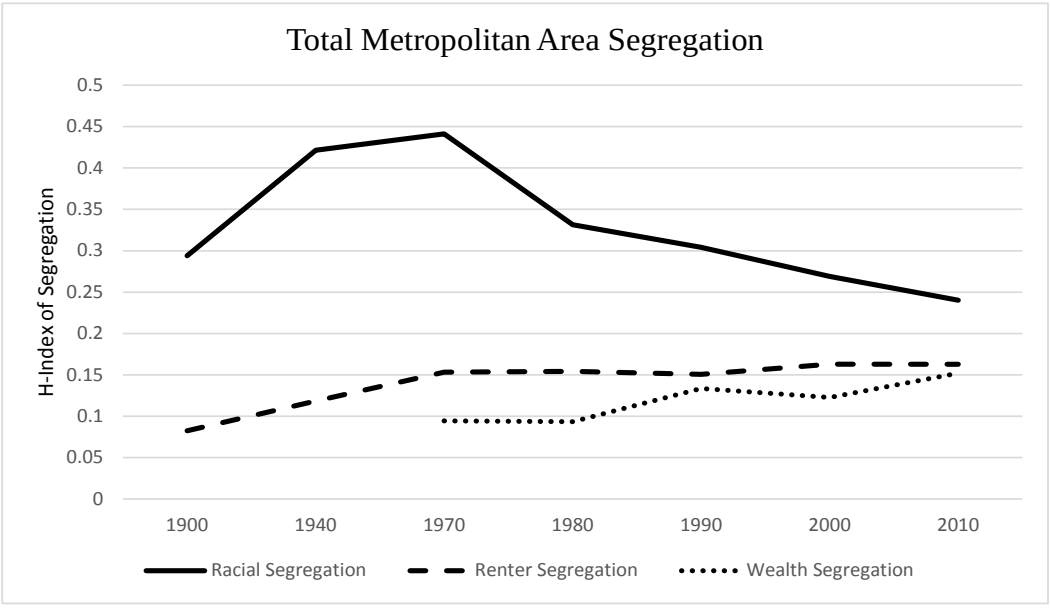
The maps make it clear that white and nonwhite residents of Chicago live in homogenous neighborhoods. Overall, the city is very segregated. The value of H_{c_t} in 2011 for Chicago was 0.379; the value of H_{m_c} (total segregation across cities) for the Chicago metropolitan area was 0.192. In the bottom panel, the neighborhoods within the cities of the Detroit metropolitan area are much more homogenous. The stark horizontal divider between the blue and green dots is 8

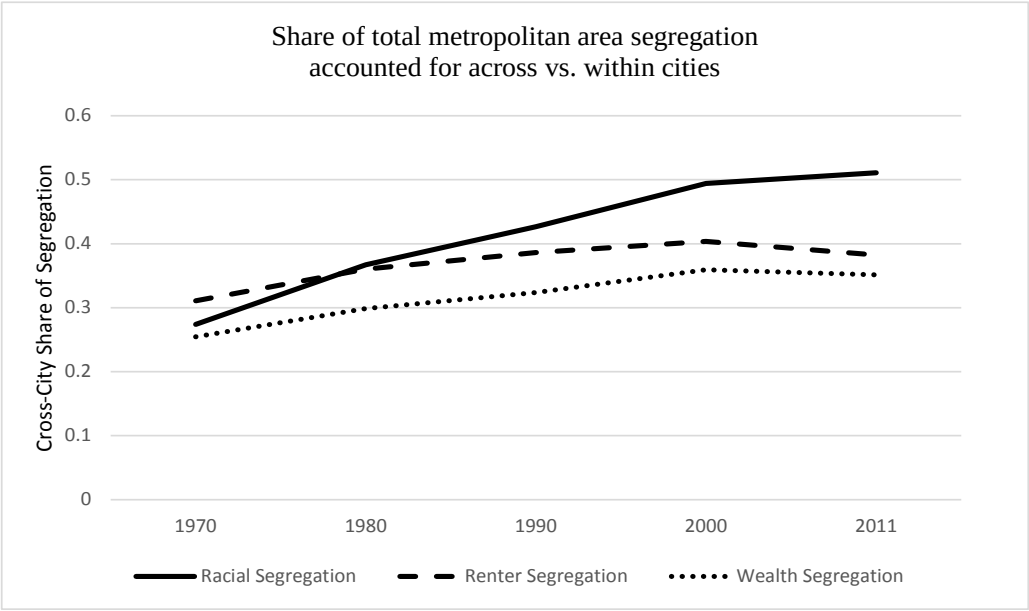
Mile Road which marks the boundary between Detroit and the neighboring ***city*** of Warren. A similar vertical division can be found on the right hand side of the picture, noting the boundary between Detroit and the cities of Grosse Pointe, Grosse Pointe Park, Grosse Pointe Farms, and Grosse Pointe Shores.[56] The value of H_{c_t} (within city segregation) in 2011 for Detroit was 0.220, while the value of H_{m_c} for the metropolitan area was 0.395.

How has metropolitan area segregation changed over time? The top panel of Figure 1.7 shows total metropolitan segregation measured at the tract level (H_{m_t}) since 1900, while the bottom panel shows the share of that segregation that was accounted for across cities rather than within them ($\frac{H_{m_c}}{H_{m_t}}$) from 1970-2011.

[56] The maps are shaded based on population density, hence the darker colors in Chicago.

Figure 1.7: Changing Metropolitan Segregation Patterns





These figures reveal that by 1970, racial segregation had peaked and begun to decline, while class segregation began a slow ascent. Between 1970 and 2011, in nearly every

metropolitan area in the United States, neighborhood segregation was exchanged for city level segregation along both race and class lines. The figures also show that historically, class segregation was much lower than racial segregation, but by 2011, the indices had converged substantially. The relationship between race and class segregation also increased over time. In 1990 (the earliest date for which I have data on all 330 metropolitan areas), the correlation between race and renter segregation was 0.19. It rose to 0.32 in 2011. The correlation between race and wealth segregation increased from 0.46 to 0.51 over this same period. The link between race and wealth segregation across city lines is even stronger; it was 0.70 in 2011. This tightening link between race and class is driven by changes in both race and class segregation, both within and across cities. However, these remain distinct demographic patterns.

Chapter 2: Local Government Action Contributes to Segregation 1900-1940.

Segregation along both race and class lines grew in tandem with the growth of cities (Meyer 2000). Race, ethnic, and class enclaves developed as urbanization brought white migrants, African Americans, and immigrants to cities (Teaford 1979). At the turn of the century, the predominant pattern of segregation occurred building by building, block by block, and sometimes several blocks by several blocks, but typically not by neighborhoods (Logan et al. 2015, Meyer 2000). Many cities featured multiple racial, ethnic, and class enclaves (Kellogg 1982, Rabinowitz 1978). In Philadelphia, for instance, about 40% of the black population lived in central city wards (4th, 5th, 7th, and 8th); but there were significant clusters of black homes in the 14th, 15th, 20th, 22nd, 26th, 27th, 29th, 30th, and 37th wards too (DuBois 1899). In Atlanta blacks lived in "Shermantown, Mechanicsville, Hell's Half Acre, Bone Alley, and Pigtail Alley," as well as "Darktown….Peasville…and Jenningstown," (Rabinowitz 1978, p106). By 1940 neighborhoods had become much more homogenous. So, while the residential location of people of color and the poor was nearly always restricted, the pattern of segregation changed during the years leading up to the Second World War. In this chapter I argue that local governments played a role in producing this change. Governments adopted zoning and other policies that created or reinforced segregation in service to business elites and white, property-owning constituents who were demanding a larger, more active city government.

In the very large social science literature on the causes and maintenance of race and class segregation, the contributions of local government are given limited attention.[57] Boustan (2012) concludes, "the most important [factor in the generation of residential segregation] appears to be individual choices of white households" (p318). Hayward (2013) agrees, arguing that restrictive

[57] The contributions of the federal government, on the other hand, are well covered (Jackson 1985, Massey and Denton 1993).

covenants were, "a more significant mechanism of racial segregation," than local government activities (p59).[58] Other scholars combine private and public actions into a single theoretical construct. For example, Cutler et al. (1999) provide evidence of "collective action racism" which involves, "specific policy instruments such as racial zoning or restrictive covenants prohibiting sales to blacks, or organized activities such as threatened lynchings or fire bombings that discourage blacks from moving into neighborhoods" (p476). Similarly, Dreier et al. (2004) associate racial zoning laws with biased real estate codes of ethics, racial steering, insurance redlining, and white violence concluding that, "racial segregation thus stems from the routine practices of the private real estate industry" and the spontaneous choices of urban residents "as well as from government policy" (p 120).

The role of government was important. For one thing, using the state to engage in promote restrictive collective action is qualitatively different than arranging segregation privately. Marshalling the power of city government institutionalizes prejudicial behavior and denies victims recourse. As Abrams (1955) explains, "passions and prejudices…unsanctioned by government…exhausted themselves" (p206). But when democratically elected local governments developed policies promoting segregation they became, "instruments of oppression against minorities" (p207).

Furthermore, while prejudicial attitudes and behavior were widespread during this period, government action was more variable. Understanding where and when local governments worked to create segregation along both race and class lines helps to clarify where segregation was likely to become entrenched and where it was more fluid, as well as provide insight into the factors that generate consequential local policy decisions.

[58] Of course, restrictive covenants required government action for enforcement. However, they could be generated without government involvement.

In this chapter, I explore the factors that contributed to the adoption of zoning laws. I argue that zoning was enacted by political elites seeking to manage the distribution of public goods to their core supporters. To present that argument, I first offer a historical narrative detailing the adoption of zoning laws by municipal governments. Then, I present a quantitative analysis of these adoptions. I find that cities with higher property taxes and larger budgets (where more was at stake), where Republicans (who led the municipal reform movement) had greater support, and where political participation was low (and thus more likely to be heavily skewed toward middle-upper class, native, white voters), zoning ordinances were more likely to be adopted. Finally, I analyze the effect of zoning adoption on future levels of segregation. I show that cities that were early adopters of zoning went on to become more segregated along both race and class lines than similarly situated cities without early zoning plans.

The dawn of the 20th century was an exciting time for local government. Populations exploded as the industrial revolution took hold. In this environment, the limited, caretaker approach to city governance became suddenly and profoundly insufficient for maintaining health, order, and property. Monkonnen (1988) explains, "cities could have chosen to ignore sewage, crime, unschooled children, and slow transportation by simply tolerating higher disease rates, offense rates, illiteracy rates, and traffic tangles" (p4). City governments did not take that path. Instead city governments worked aggressively to shape their social and economic environments. As Chapter 1 revealed, between 1890 and 1940, cities became modern – providing services like clean water, fire protection, police patrol, and road paving. It was in this environment that cities also began to seek control over space and residents' use of space through zoning and city planning. The end goal of this control, as was true of most Progressive Era reforms, was to improve the lives and opportunities for businesses and residents – more

specifically, US born Anglo residents (Tretter 2012, Woodward 1955, Toll 1969, Brownwell 1975).

As Monkonnen indicates, it was far from obvious that cities would assert control over their environments, but the rapid spread of slums, worries about skyscrapers blocking natural light, fears of conflagration, and concern about public health threats provided early inspiration for cities to invoke their policy power of regulation over nuisances (Toll 1969).[59] Reformers debated the correct policy solutions for these ills, recommending for example, density restrictions (Woodbury 1929), stricter building codes (Power 1983), the removal of alley dwellings (Silver 1997), or policies, including increased public transportation, that would encourage suburban homeownership for the working class (Baar 1996). In many cases, typically at the urging of local chambers of commerce, city councils chose to pursue zoning – regulating the use, height, and area of buildings and land (Brownwell 1975). Zoning was sometimes, but often not, combined with general development plans for the city. While zoning became wildly popular, planning did not. This decoupling of zoning from planning was viewed negatively by some leaders of the early planning movement who thought the creation of homogenous neighborhoods would be likely to reinforce social divisions and inequality (Toll 1969). Of course, this was often precisely the goal of zoning supporters.

The rise of social Darwinism contributed to the attraction of zoning as a solution for burgeoning problems. Social Darwinists argued that the evolution of humanity would follow a process of natural selection in which the environment played a defining role. As a result, controlling the environment was of utmost importance (Toll 1969). A related body of literature

[59] A number of important court battles ensured that zoning would be constitutionally allowed for the promotion of health, safety, welfare, and morals and did NOT constitute the deprivation of life, liberty, or property (see Hayward 2013 and Toll 1969 for overviews).

came to understand race and the differences between racial and ethnic groups as biologically rooted, hence, immutable (Hayward 2013). According to this doctrine, the inherent inferiority of blacks and other people of color (Native Americans, Chinese, Japanese, Mexicans), the preservation of "race purity" demanded, "segregation and discrimination in recreation, in religious service, in education, before the law, in politics, in housing, in stores, and in breadwinning" (Myrdal 1944, p58). Additionally, scientific and medical experts as well as politicians believed that the unsanitary habits and homes of the poor and people of color spread epidemic disease (Shah 2001, p6). In combination, these new theories offered a convincing rationale for the creation of special districts to quarantine offending groups. By 1930, about half of all large cities in the US had adopted comprehensive zoning plans.

Political leaders often used threats to public safety as a rationale for legislating segregation. New York's 1916 zoning law, the first comprehensive zoning ordinance in the nation, sought to limit the health threat posed by skyscrapers which blocked natural light and so, contributed to the spread of tuberculosis (Toll 1969, p154). Because immigrants and Blacks were viewed as disease carriers, segregating them was a typical goal of zoning. In San Francisco, the first city to segregate explicitly on the basis of race, whites had grown increasingly paranoid that Chinese residents were spreading diseases like smallpox and tuberculosis and in 1890, enacted an ordinance that required all Chinese residents and their businesses to move, within 60 days, to the section of town which had been set aside for, "slaughterhouses, tallow factories, hog factories, and other businesses thought to be prejudicial to the public health or comfort" (McClain 1996, p224). In Baltimore, segregationists agreed that, "blacks should be quarantined in isolated slums in order to reduce the incidents of civil

disturbance, to prevent the spread of communicable disease into nearby white neighborhoods, and to protect property values among the white majority" (Power 1983, p301).

The belief that zoning would create stability in property values was widely held and generated strong support from land owners, commercial organizations, bankers, realtors, and developers (Abrams 1955, Brownell 1975, Weiss 1987). Boston's first height restriction was passed in 1892 at the behest of downtown property owners who feared that the new skyscrapers would lead to an oversupply of office space and drive down property values (Kennedy 1992). In some places, this view had to be cultivated. In Los Angeles, for example, some developers were opposed to the city's 1908 zoning law because they worried it would inhibit growth (Weiss 1987). To combat such reservations, early supporters of zoning made sure to argue that their proposals would, "enhance, not detract from property values," (Toll 1969, p150). Zoning could easily have been invoked to improve the quality and health of working and lower class neighborhoods and limit land speculation (as some of the early reformers argued it should); however, "political pressures from those less inclined toward broad civic improvement" won out (Silver 1997, p24).

As zoning practices spread through the 1920s, emphasis on the enhancement of property values became the dominant argument; almost universally, it was believed that the wrong sorts of people residing or sometimes even working in an area could negatively impact property values. Abrams (1955) quotes an early real estate text which argued that, "…property values have been sadly depreciated by having a single colored family settle down on a street occupied by white residents," and another that claimed a similar effect of "unassimilated aliens." Both prescribed "rigid segregation" as a solution, "no matter how unpleasant or objectionable the thought may be to colored residents" (p159).

Aside from adding wealth to property-owning and voting residents, city governments had an even more powerful reason to protect and enhance property values – taxes (Lees 1994). An advertisement run by 5th Avenue merchants in the March 5th and 6th, 1916 editions of the New York Times argued that failure to support the city's new zoning plan would lead to "vacant or depreciated property," which would lead to "reduced taxes, leaving a deficit made up by extra assessment on other sections" (p5). Rising property values allowed municipal governments to grow without increasing tax rates. When some property values actually declined, municipal officials faced the unwelcome task of raising tax rates or cutting the budget.

As municipal governments began to spend vast sums on improving the lives and environments of residents, ensuring that the right (white/wealthy) residents benefited from the new city services became of utmost importance. This goal was clear to observers at the time. Booker T. Washington explained that, "the negro objects to being segregated because it usually means that he will receive inferior accommodations in return of the taxes he pays." Such objection stemmed from the belief that segregation would ensure that, "the sewerage in his part of the city will be inferior; that the streets and sidewalks will be neglected, that the street lighting will be poor; that his section of the city will not be kept in order by the police and other authorities, and that the 'undesirables' of other races will be placed near him." Thus, Washington concluded, "when a negro seeks to buy a house in a reputable street he does it not only to get police protection, lights and accommodations, but to remove his children to a locality in which vice is not paraded" (Washington 1915, p113-114). Frequently, white elites made arguments that taxing whites to pay for black public goods (like schooling) was "an indignity." One delegate to the Louisiana Constitutional Debate in 1864, incredulous at the proposition asked, "Shall we tear the slave away from his master and then force the master to educate him?"

(Louisiana Constitutional Debate, quoted at length in Bond 1934, p16-17). As a result, in many cities (see Chapter 3), black areas lacked municipal services such as, "paving, water, sewerage, lighting and garbage removal," (Knight 1927, p53; also Myrdal 1944).

Given that zoning was viewed as a way to both increase property values and maintain exclusivity in the distribution of public goods, it is unsurprising that Southern cities made early use of zoning to hem in expanding black neighborhoods and create clear dividing lines between white and black residential areas. Of course, the development of racial zoning in the South was part of a much larger process of reconfiguring race relations after the Civil War. During the period of Reconstruction and Redemption, whites subordinated, exploited, and killed blacks, but even in this context, the legal segregation of the races was not a foregone conclusion (Woodward 1955). [60] In fact, although Jim Crow laws were widespread, most Southern cities did not legislate residential segregation directly.[61]

Blacks being able and willing to live in white neighborhoods was a necessary (although not sufficient) condition for the enactment of legislation. Baltimore passed the first racial zoning law directed at blacks in 1910 following the violent response of white residents as black migrants moved into previously all white areas. Baltimore's ordinance prohibited whites and blacks from moving into city blocks occupied by a majority of members of the other race. Quite aware of the requirements of the 14th amendment, the Baltimore council argued (and the Maryland Supreme Court agreed), that because the ordinance placed the same limitations on both racial groups it

[60] One vivid example of the ways in which Jim Crow changed existing practice comes from New Bern, North Carolina. In 1913, the city aldermen passed an ordinance which required that all "colored bodies" buried in the public cemetery be dug up and moved to a segregated location.
http://www.newbernsj.com/article/20140209/Opinion/302099914

[61] Rabinowitz (1978) argues that the picture was different with respect to schooling. Here, segregation was immediate and unchanging after the end of the war.

was not discriminatory (Virginia Law Review 1916).[62] The vote of the city council fell along party lines with all of the Democrats in support and all of the Republicans opposed.[63] Republicans were joined in their opposition by the entire community of black residents, some real estate brokers, and white homeowners who lived in integrated neighborhoods (Power 1983). Democrats were not just responding to their white voters in their promotion of segregation. Limiting black residential location also bolstered Democratic political power by ensuring that blacks would be packed into certain wards; thereby reserving the rest of the city for Democratic control (Rabinowitz 1976).

In some places, black political power slowed or inhibited the enactment of segregation ordinances (Rice 1968). In St. Louis, an effort to pass a segregation ordinance failed because it was opposed by a significant number of city elites (including most of the city's leading Republicans, labor interests, religious leaders, and newspapers). The National Association for the Advancement of Colored People (NAACP) and the Knights of Pythias lobbied the St. Louis city government tirelessly and ultimately convinced 21 of the 28 aldermen and the mayor to vote against it. In 1912, the city went so far as to station five police officers at the house of a black family to protect them from, "possible attack by whites who resent what they term a 'Negro invasion' in their residential district" (*The Crisis* 1912 Vol 4, No 6, p272). In a low turnout election in 1916, supporters of the segregation ordinance won a city referendum and the city immediately began mapping the race of each city block. (Meyer 2000 19-21). In Kansas City, Missouri, blacks had a modest amount of political power due to their ties to the (Democratic)

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[62] Although the Court agreed with the city's reasoning about the 14th amendment, it ultimately declared the ordinance unconstitutional because its provisions were retroactive thereby representing a taking by the government. (*State v. Gurry* 121 Md. 534 (1913))

[63] Republicans were generally (tepidly) supportive of black rights in Baltimore and between 1890 and 1931, six black Republicans served on the Baltimore City Council (Greene 1979). Over the course of their careers, these councilors led the city council to provide significant contributions to Baltimore's black community; but none were able to defeat the segregated housing legislation.

Pendergast machine. Despite support from a significant segment of the city's white population, a racial zoning ordinance never made it past the lower chamber of the city council (Meyer 2000).

Bacote (1955) reports that throughout the late 1800s in Atlanta, black support was frequently courted by white factions. For instance, in the 1891 election, black candidates were nominated for council positions in the 1st, 4th, and 6th wards on the Citizens' ticket (an anti-prohibitionist faction of the Democratic Party). White factions did this when they were in danger of losing the election – in 1891 the anti-prohibition Democrats were worried about a Populist victory. To prevent white factions from seeking black support in the future, the Democratic Party adopted the white primary in 1892, and the state of Georgia enacted a new constitution in 1908 which included a character requirement, a literacy test, and made property ownership a condition for registration (Bayor 1996). These changes severely restricted black participation, ensuring that white factions would only rely on white votes. The evisceration of the black electorate and black representation opened the way to the city's enactment of segregation ordinances (Key 1949, Kousser 1974, Woodward 1955).

Atlanta enacted a racial zoning ordinance on the heels of a violent race riot in 1906. The riot erupted after local newspapers reported four alleged (but never substantiated) assaults upon white women by black men. According to Garrett (1969), the riot was ignited by the sight of black passengers riding next to whites on street cars. A white mob killed and beat dozens of black Atlantans over the course of three days. A concerted organizing effort among the city's African American population followed. White elites and politicians denounced the riot, and a public/private relief fund was even established for families of the murdered victims (Garrett 1969). However, the riot also led many whites to conclude that, "separation of the races is the only radical solution of the negro problem in this country" (Charleston News and Courier,

quoted in the New York Times, September 30, 1906). Following the passage of the ordinance in 1913, all blocks in the city were assigned racial designations based on the race of the majority of current residents (Silver 1997).

Fighting racial zoning was one of the early nationwide causes to be adopted by the NAACP (Rice 1968, Meyer 2000) and due to the organization's work, in 1917, the Supreme Court ruled racial zoning unconstitutional in *Buchanan v. Warley*. In the *Buchanan* decision the justices did not seek to protect the rights of black property buyers or to prohibit "amalgamation of the races," but rather to protect the right of white owners to, "sell or lease their lands and houses to whomsoever they pleased" (Virginia Law Review 1928, p531).[64] Nonetheless, the Chicago Defender declared that the, "hydra-headed monster of segregation…was killed by the Supreme Court," and argued that the, "decision [was] a direct slap in the face to white southern oligarchy." (November 10, 1917). According to Rice (1968), it was also a, "victory for moderate whites and Republicans" (p197).

Following *Buchanan*, many cities sought to enact constitutionally defensible racial zoning plans by turning to comprehensive city plans (Silver 1997).[65] In 1914, a racial zoning ordinance was proposed in Birmingham while the *Buchanan* case was already moving through the court. A group of black attorneys convinced the Birmingham city council that they could face a costly legal battle if the Court ruled against Louisville's ordinance. In order to prevent this, and to appease white demands for segregation, the council chose instead to adopt a

[64] The Court found that the ordinance improperly restricted the rights of property owners to dispose of property. It did not challenge the separate-but-equal doctrine that was in place as a result of the 1896 *Plessy v. Ferguson* decision.

[65] San Francisco was the first city to utilize a form of use zoning for a racial purpose. In 1885, the city enacted a set of regulations for laundries operating in residential areas in an attempt to keep Chinese residents (who owned nearly all of the laundries and typically lived above them) from white neighborhoods. The law was invalidated by the Supreme Court in the 1886 case *Yick Wo v. Hopkins* in which the Court found that a law which is race neutral on its face may still violate the 14th amendment if administered in a prejudicial manner.

comprehensive zoning plan in 1926 that included racial designations for different city zones (Connerly 2005). Atlanta's 1922 revision of the zoning ordinance combined zoning categories of land use and building regulations with racial designations. For instance, the city's master zone map noted that, "unless otherwise designated on this map, all areas designated as dwelling house districts are also class H1 height districts and white race districts." Other areas were designated as "colored district and an apartment house district" or "colored district and dwelling house district."[66] In 1929, the zoning code was again revised, this time including a prohibition on occupying a home on a street where the majority of residences were occupied by persons whom the resident was forbidden to marry by law (Meyer 2000). Eventually, the court ruled against these ordinances and by the 1930s segregationists had dropped the racial designations in favor of comprehensive zoning.

As the court struck down plans that endorsed outright racial segregation, the case for other forms of zoning had been building. A series of judicial decisions established the bounds of permissible approaches to regulating the uses and size of buildings. For instance, the court determined that exercise of police power (e.g. the authority to regulate behavior and enforce order), "must be reasonably adapted to the purpose of protecting some interest of the community," (C.C.S. 1925 p417) and that nuisance regulation and other use restrictions, "must bear a substantial relation to the public health, safety, morals or general welfare" (Monchow 1928, p323). Zoning ordinances spread rapidly throughout the 1920s, particularly after the Supreme Court determined that comprehensive zoning would not require cities to compensate owners for losses in prospective land values in the 1926 case *Euclid v. Ambler Realty Company*.

[66] https://cityloci.files.wordpress.com/2014/07/6-atlanta-19291954.pdf

Zoning adoption was also propelled by the Republican-led federal government. In 1922, under the direction of Secretary Herbert Hoover, the Department of Commerce issued a template for state enabling laws in the Standard State Zoning Enabling Act. The Act was published in 1924 and a revised edition was released in 1926. Thus, while Republicans tended to oppose zoning in the South, they were frequently the drivers elsewhere. In Boston, Republicans were shut out of city government by the powerful Democratic organization, leaving them to pursue zoning laws through the Massachusetts state legislature instead (Kennedy 1992, p113).

The arguments surrounding the adoption of comprehensive zoning were broad but imbued with municipal Progressivism's race and class prejudices (Bridges 1997, Trounstine 2008). Comprehensive zoning supporters highlighted benefits such as the "adequate provision of light and air," "stabilization [sic] and protection of property values," "protection and maintenance of the home and home environment," "to apply the most up-to-date methods of sanitation and hygiene, "simplifying the problems of street traffic regulations," and the prevention of congestion (A.C. Holliday 1922, p217). By separating industrial, commercial, and residential uses into separate districts each with standard regulations regarding the use, height, and area of buildings, zoning would make, "every town, city or village a more orderly, convenient, economic and attractive place in which to live and work," (A.C. Holliday 1922, p218,). One key to ensuring high property values and orderly living arrangements was the ability for zoning ordinances to prevent noxious uses from polluting residential neighborhoods (Fischel 2001). Apartment buildings constituted one such noxious use.

In *Euclid v. Ambler*, Justice Sutherland explained that the apartment house is often a, "mere parasite, constructed to take advantage of the open spaces and attractive surroundings... interfering by their height and build with the free circulation of air and monopolizing the rays of

the sun…depriving children of the privilege of quiet and open spaces for play enjoyed by those in more favored localities…until, finally, the residential character of the neighborhood and its desirability as a place of detached residences are utterly destroyed. Under these circumstances, apartment houses, which in a different environment would be not only entirely unobjectionable but highly desirable, come very near to being nuisances." (p394-395).

In allowing the protection of single-family home neighborhoods, *Euclid* laid the groundwork for the long-term shift from a country segregated by race to one that became increasingly segregated by income. In the early 20th century, race and income were so strongly overlapping that denying apartment buildings in a neighborhood of single-family homes would also largely prohibit blacks and many immigrants from residency. Making this point, Bruno Lasker, editor of Survey Magazine asked:

> "Why, in this country of democracy, is a city government, representative of all classes of the community, taking upon itself to legislate a majority of citizens – those who cannot afford to occupy a detached house of their own – out of the best located parts of the city area, practically always the part with the best aspect, best parks and streets, best supplied with municipal services and best cared for in every way? Why does it deliberately 'segregate' the foreign-born who have not yet become sufficiently prosperous to buy or rent a home under building regulations which preclude the possibility of inexpensive development and construction?" ("Unwalled Towns," *The Survey*, Volume 43, 1920, p677).

Lasker suggested that the answer to his question was the dominance of politics by wealthy property owners who sought to employ, "public power for the purpose of protecting sectional interests" ("The Issue Restated," The Survey, Volume 44, 1920, p278). Segregation enforced via zoning was a means to accomplish this end. In cities like Chicago, Kansas City, and Los Angeles, some of the most powerful voices in support of zoning were homebuilders and real estate boards who stood to gain monetarily from segregation (Gotham 2000).

With such wide-ranging positive effects for powerful interests, it is easy to see why zoning became so popular. Yet, by the close of the 1920s, many cities had not yet adopted zoning plans. I have argued that zoning was a tool that enables elected officials to make it easier to limit the distribution of public goods to certain constituents and to ensure high property taxes, and that it was successfully implemented where zoning supporters had political power. In order to provide more systematic evidence of this argument, I collected data on all of the cities that enacted *zoning ordinances* between 1900 and 1930. I gathered racial zoning information from several reports including Rice (1968), Connerly (2005), Silver (1997), and numerous issues of the NAACP's *Crisis Magazine*. To encode general zoning plans, I drew on an article published in *The American City* by Norman Knauss in 1929, which listed the years that zoning ordinances were enacted. Knauss reports having sent a survey to all municipalities with the authority to enact zoning. His list includes 768 municipalities that reported having an ordinance. I coded the city year in which zoning was enacted as a 1 and years leading up to that date as a 0. Cities exit the analysis once they enact zoning. Cities that were included in the Census but had no zoning law by 1929 are coded 0 for the entire time period. Zoning is my dependent variable. To these data, I merged city spending and demographic data culled from the Census (which are described in Chapter 1).

My primary independent variables are per capita total *Expenditure* and *Property Taxes*. I log the total expenditure variable because the data have a strong rightward skew. I expect both of these variables to be positively correlated with zoning. Where spending and property taxes were higher, local officials would have a greater incentive to protect the existing distribution of public goods and the total tax revenue. I include two additional political variables – the county-level *Republican presidential vote share* (linearly interpolated for non-election years) and county

level *Turnout* of age-eligible voters.[67] Republican vote share is a rough proxy for the degree of support for regulatory policy, of which zoning was an example. I expect that greater Republican support will be associated with a higher likelihood of implementing zoning – except in the South. A range of voting restrictions were in place throughout the time period under consideration (Keyssar 2000) and I include the turnout of the age-eligible population to capture the permissiveness of the electoral environment. This measure is preferable to including state level laws like the poll tax or literacy test because it allows for sub-state variation in the electoral setting. Generally, higher turnout is associated with greater participation of the poor and people of color (Hajnal 2010); populations that both tended to be opposed to zoning plans and stood to lose from their implementation. Thus, I expect that where turnout was higher, the likelihood of enacting zoning was lower.

A wide range of alternative explanations for the adoption of zoning were proposed by contemporary observers and later analysts of the movement, many of which are correlated with the political factors I seek to test. Writing about racial segregation laws, Woodward (1955) argues that the economic depression at the end of the 1890s led to "aggression against the minority race" (p81). To account for this possibility, I include a measure of the share of the total population that was *Unemployed*, linearly interpolated from the Census of Population and Housing. Fischel (2004) claims that zoning adoption followed the invention of trucks and busses, which made it feasible for businesses and apartment buildings to be built in residential and suburban areas, away from rail lines. I include per capita spending on *Roads*, which include street paving, street cleaning, and street lighting to capture differences in vehicular accessibility. In the "History of Zoning," Gordon Whitnall explains that, "the practice of zoning began…when

[67] This denominator includes men over the age of 21 until 1919 and both women and men over the age of 21 in 1920 and later elections.

the concentration of population in cities began to be pronounced" (1931, p2). The "urge for zoning" he goes on to say, "has arisen from the desire and the necessity to bring some order out of the chaos that has resulted from the anarchistic development of our cities." I include the *10 year rate of change* in total population and population *Density* (persons per acre) to capture urbanization. To measure threats of disease and conflagration, I include per capita spending on *Health care* and *Fire-fighting*.

As described above, contemporary supporters of segregation ordinances often asserted the protection of white, single-family neighborhoods as the primary goal. To measure the social threat of black and foreign populations, I include the share of the population that is *Black*, *Foreign Born White*, and *Foreign Born Non White*. To measure the threat of lower-income (apartment dwelling) populations I include the share of the population *Renting* their homes. To capture the presence of noxious industry that might be better contained in a zoned city, I include the share of the employed population working in *Manufacturing*. This variable also captures an argument presented by Connerly (2005): that industrialists preferred to maintain segregated cities in order to dampen the threat of union organizing across racial lines.

Many scholars (e.g. Woodward 1955, Myrdal 1944, Blumer 1958) understand segregation as a mechanism to bolster hierarchical racial control, as social distance may preserve the relative status advantage of whites. For instance, Wade (1967) argues that segregation was, "rooted in the white's need for discipline and deference," and that it, "provided public control to replace dwindling private supervision of the master over his slave" (p278). If this is the case, we should expect that cities with existing patterns of segregation would be most likely to institutionalize the practice. It is also possible, however, that cities with high levels of segregation would have had no need for legislation (see Silver 1997 on Roanoke). To adjudicate

between these two possibilities, I include a dummy variable coded 1 if the city had *Segregated Schools*. This variable is encoded from Johnson (2015) who characterizes states as requiring segregation, permitting segregation, prohibiting segregation, or with no segregation statutes. My variable is coded one for states that require segregation, .5 for states permitting segregation, and 0 for all others. Bobo, Kluegel, and Smith (1997) argue that the political institutionalization of Jim Crow ideology was driven by the needs of the Southern economy, particularly the exploitation of black agricultural labor. On the other hand, Godsil (2006) suggests that whites with a significant stake in retaining a large black laboring class may have opposed racial zoning, as such ordinances might lead black workers to leave the city. To account for either possibility, I include for the share of the workforce employed in the *agricultural sector*. If Bobo et al.'s theory applies to zoning, we would expect a positive relationship between agricultural dominance and zoning. We'd expect the inverse if Godsil is correct.

My observations represent 4293 city-years from 240 cities. All spending data are inflation adjusted and linearly interpolated. Census data are linearly interpolated as well. I run logistic regressions with errors clustered by city. I include fixed effects for region, which means that these comparisons are all within the same area of the country. That is, the regressions analyze the effect of city expenditures on the adoption of zoning in each of four regions – West, North, Midwest, and South. Column 1 shows the base model with no controls. Column 2 includes all of the above-described controls. In Column 3, I change the dependent variable to focus on racial and comprehensive zoning. Here, the dependent variable is coded 1 when the city adopts either race zoning or comprehensive zoning and is coded zero otherwise. In this analysis, I present an interaction between Republican vote share and region to show how party

politics differed in the South. These results are presented in Table 2.1 and summary statistics are shown in appendix Table A2.1

Table 2.1: Effect of Local Political Factors on Zoning Implementation

	Column 1		Column 2		Column 3 Race and Comprehensive Zoning Only	
	β	P>|z|	β	P>|z|	β	P>|z|
Expenditure $ Per Capita (logged)	0.787	0.008	1.255	0.000	1.354	0.000
Property Taxes $ Per Capita	0.052	0.000	0.049	0.007	0.072	0.000
Presidential turnout	-2.094	0.005	-3.18	0.001	-2.639	0.015
Republican Vote Share	5.133	0.000	5.249	0.000	11.292	0.002
% For. Born White			-4.645	0.011	-5.797	0.003
% For. Born Non White			-24.709	0.011	-26.98	0.065
% Black			-2.162	0.359	-3.398	0.177
Highways $ Per Capita			-0.330	0.027	-0.292	0.047
Health $ Per Capita			0.234	0.482	-0.322	0.505
Fire $ Per Capita			0.224	0.203	-0.052	0.759
Density			-0.006	0.637	-0.010	0.499
% Renters			2.136	0.170	5.743	0.001
% Employed in Manufacturing			2.643	0.049	3.361	0.027
% Employed in Agriculture			5.527	0.000	6.735	0.000
10 year population growth rate			-1.355	0.026	-2.242	0.001
School segregation			1.276	0.068	1.150	0.115
% Unemployed			5.338	0.052	5.788	0.073
Midwest	-0.621	0.019	-1.567	0.000	0.442	0.860
North	-0.883	0.000	-1.788	0.000	1.868	0.441
South	0.313	0.349	-1.628	0.056	4.287	0.089
North * Rep. Vote Share					-1.069	0.786
Midwest * Rep. Vote Share					-4.805	0.207
South * Rep. Vote Share					-8.347	0.030
Constant	-8.436	0.000	-8.073	0.000	-15.241	0.000
N	4293		3514		3687	
R^2	0.123		0.178		0.170	

Note: Logistic regressions; Robust Standard Errors clustered by city

Table 2.1 offers strong support for my claim that cities with greater public goods expenditures and more property tax revenues were more likely to implement zoning ordinances. With all else equal, shifting from the minimum per capita expenditure (about $4) to the maximum (about $476), changes the probability of adopting a zoning ordinance from 0.004 to 0.15. Similarly, cities with the lowest property taxes per capita (about $2) rarely adopted zoning ordinances, while those with the highest taxes ($67 per person) had around an 18% chance of implementing zoning. Where turnout of the voting age population was higher, zoning was less likely to be adopted. This result supports Toll's (1969) claim that, "the demand neither for zoning nor for planning had grown out of any widespread outcry in the cities of the United States" (p199). Zoning adoption appears to have been led by the Republican Party, except in the South, where Republican voting strength limited the likelihood of adoption of comprehensive and racial zoning ordinances.[68] These data fit the historical narrative presented above well.

In addition, many of the control variables suggest interesting patterns. For instance, there is no evidence that larger racial and ethnic minority populations drove zoning adoption. Nor did greater threats to public health or conflagration increase the likelihood of zoning. Contrary to Fischel's prediction, zoning was not more common in cities with more spending on roads. Economic factors appear to have played a more important role. Zoning adoption was more likely in cities with higher unemployment and with greater shares of the workforce employed in manufacturing and agriculture. It was also more likely in cities with more renters (particularly in the case of comprehensive and racial zoning). This conclusion is bolstered by a secondary analysis in which I add a measure of renter segregation in 1900 for 42 cities. Where renters were

[68] Cities with reformed institutional structures were not more likely to adopt zoning. In fact, nonpartisan cities were somewhat less likely to adopt. This effect is largely driven by cities in the South where nonpartisan laws may have advantaged Republicans.

more segregated from homeowners, zoning was much more likely to be implemented. This finding suggests that homeowners were more supportive of zoning measures when they lived in more defined neighborhoods to protect. It is also clear that zoning ordinances were much more likely to be enacted in places that had a preference for segregation. Where segregated schools were the law, cities were more likely to adopt zoning. In additional analyses I find that cities with marked segregation at the turn of the Century, particularly in the South, were also more likely to adopt zoning. These results support the contention that zoning was a mechanism used to reinforce existing racial hierarchies. In the next section I provide evidence that this was precisely its effect.

Zoning Generates Segregation

As Chapter 1 revealed, race and class segregation existed prior to the introduction of public policy measures that would separate residents and land uses. The history of private mechanisms producing segregation is well understood (e.g. Jones-Correa 2000, Meyer 2000, Burgess 1994, Myrdal 1944). Blacks, immigrants, and the poor tended to live in areas that were removed from native white middle class residents for a variety of reasons. Rabinowitz (1974) explains, "some of the housing segregation was voluntary: Negroes sought proximity to their jobs, welcomed the freedom from white surveillance, and enjoyed the company of other blacks" (p98). More important was "black poverty, which limited housing options" and "white pressures to keep blacks out of their neighborhoods" (p98). Restrictive covenants, clauses written into property deeds specifying restrictions on the use of the property, were widely used to bar undesirable neighbors from occupying properties starting in the late 1880s (Fogelson 2005). Mortgage discrimination and real estate steering were institutionalized in the early 1900s (Helper 1969). However, Hayward (2013) explains that the problem with relying on black poverty or

restrictive covenants to maintain segregation was that the market was susceptible to encroachment, requiring coordination and constant vigilance against potential violators (Brooks 2002, McAdams 2008). Marshaling the power of municipal governments to restrict land use offered developers and property owners the promise of a protected investment.

Evidence indicates that zoning adopted in the early 1900s followed patterns created by private actors (Burgess 1994, Tretter 2012). Writing in 1929, M. T. Van Hecke explained, "zoning programs are frequently influenced by restrictions in deeds. Where a very substantial area has been set aside for a high type use through the medium of deed restrictions, and that area is sufficiently large and geographically distinctive, zoning officials ordinarily recognize the character of the development and classify that section accordingly, so that the objectives of the statutory and deed restrictions are the same" (p420). Both supporters and opponents of zoning argued that the new laws would simply reinforce patterns produced by the market. Supporters, like Robert Whitten, creator of Atlanta's post-*Buchanan* comprehensive zoning plan, claimed that zoning would serve to lessen racial antagonism and economic loss by making the future of development more predictable as it enforced existing segregation patterns (Toll 1969 p262). Opponents suggested that zoning would add unnecessary (and some argued, unconstitutional) regulation when restrictive covenants were perfectly suited to the job of preserving neighborhoods and property (Virginia Law Review 1928, Ellickson 1973, Hayward 2013 pp118-119, Denzau and Weingast 1982, Berry 2001).

Aside from freezing private decisions in public policy, zoning also had the potential to generate race and class segregation through implementation. Ostensibly, zoning is undertaken in the interest of the city as a whole, but this, "depends entirely upon the way in which the work is done" (Van Hecke 1929, p414). This is because zoning, as an administrative task, requires

innumerable small decisions by municipal officers who may, consciously or unconsciously, bias outcomes toward some groups and away from others. E.T. Hartman (1925) explains, "chief among the problems are the granting or refusal of permits in accordance with the law, the decisions of the board of appeals in appealed cases, and appeals from either or both by interested parties" (p162-163). As is true of any regulation, zoning serves political purposes (Denzau and Weingast 1982). The discretion inherent in applying zoning laws meant that local officials could deny permits to builders who sought to house nonwhite or poor families and/or make exceptions for developers serving white and upper class residents (Bayor 1996, Meyer 2000). Abrams (1955) explains, "those who build for whites can get a modification pro forma. But the moment an unwelcome group appears, the officials stand firm" (p210). Until 1949, the Federal Housing Administration officially encouraged the use of zoning to generate race and class segregation (Stearns 1962). Valuators were instructed that, "the best artificial means of providing protection from adverse influences is through the medium of appropriate and well-drawn zoning ordinances" (Federal Housing Administration 1936, *Underwriting Manual*, Part II paragraph 227). Zoning was understood to protect locations "against declines in value or desirability" (section 306(2)) by preventing the, "infiltration of business and industrial uses, lower class occupancy, and inharmonious racial groups" (paragraph 229).

As Berry (2001) notes, providing evidence of the effects of zoning on segregation has proved challenging because zoning is ubiquitous today.[69] But as the first section of this chapter revealed, in the first decades of the 20th century, zoning adoption was variable. I argue that this variation shows that early zoning adopters became more segregated cities – even accounting for the degree of segregation that existed when zoning laws were adopted. My dependent variables

[69] Berry (2001) takes advantage of the lack of zoning laws in Houston and their presence in Dallas to show that private controls – particularly covenants – produce the same outcomes as zoning laws.

in these analyses are *Change* in the level of *Race* and *Class segregation* between about 1900 and 1970. More specifically, I subtract the level of segregation at the earliest point in my dataset from the 1970 of segregation of non-Hispanic whites and renters. The earliest measures for racial segregation are from 1890, 1900, or 1910. For renter segregation, the earliest measure is 1900 for most cities.[70] As explained in Chapter 1, the segregation of renters is an imperfect measure of class segregation – but it is the only measure that allows me to capture change over time.

My primary independent variables are drawn from the data described for Table 2.1. I expect that racial segregation will be most closely linked to racial zoning and comprehensive zoning (as the historical discussion indicated), while class segregation will be tied to all forms of zoning. In the analysis of racial segregation, my independent variable is a dummy variable noting whether a city adopted either a race based or comprehensive zoning ordinance in the period 1900 and 1930. These *Early Zoning Adopters* are coded 1, and cities that did not adopt racial or comprehensive zoning are coded 0. In the analysis of renter segregation, cities are coded 1 if they adopted any type of zoning ordinance between 1900 and 1930 and zero otherwise. I control for the *Change in City Population* between the earliest point of measurement for each city and 1970. Table 2.2 presents these results.

[70] I have data in 1900 for 49 cities. To increase the number of usable observations, I include the level of renter segregation in 1940 for 14 additional cities. The correlation between renter segregation in 1900 and 1940 is .8676. The results are nearly identical (though less precise) using only the data from 1900.

Table 2.2: Zoning's Effect on Race and Class Segregation

	Change in Racial Segregation 1900-1970		Change in Renter Segregation 1900-1970	
	β	P>|z|	β	P>|z|
Early Zoning Adopter	0.133	0.001	0.036	0.061
Change in City Population	0.000	0.002	0.000	0.000
Constant	0.057	0.103	0.026	0.181
N	88		63	
R^2	0.198		0.222	

Note: OLS Regressions

The results in Table 2.2 are striking – cities that were early adopters of zoning ordinances grew more segregated over the next 50 years compared to cities that were not early adopters. Around 1900, cities that adopted zoning had very similar racial segregation rates to non-adopting cities (0.265 for adopters and 0.287 for non-adopters). By 1970, cities that adopted early zoning ordinances had segregation levels about 10 points higher on average (0.489 compared to 0.390). Zoning also exacerbated renter segregation. Cities that were not early adopters saw about a 4 percentage point increase in renter segregation between 1900 and 1970 compared to an 8 percentage point increase in cities with zoning.

Furthermore, zoning had significant consequences for property value inequality (as its promoters had hoped). To measure property value inequality, I created a *Property Value Gini Index* built from median home values at the census tract level in 1970. Cities in which all census tracts have very similar 1970median home values have a low score on this measure, while cities that witness inequality in property values from neighborhood to neighborhood have a high score. Regressing the property gini on the dummy variable for early zoning adoption, including state fixed effects produces a coefficient of 0.09 (SE=0.003). Cities without early zoning had an average 1970 property gini of 0.04, compared to 0.13 among early zoning adopters. This difference is greater than a standard deviation on the gini index.

Of course, zoning was not the only mechanism available to local governments to promote race and class segregation. One of the most successful strategies of directing residential locations without force was the placement of segregated amenities. Austin, Texas was a pioneer in this practice. The city's 1928 comprehensive zoning plan found that, "the Negroes are present in small numbers, in practically all sections of the city, excepting the area just east of East Avenue and south of the City Cemetery. This area seems to be all Negro population" (page number). So, the plan recommended that, "all facilities and conveniences be provided the negroes in this district, as an incentive to draw the negro population to this area." This strategy would, "eliminate the necessity of duplication of white and black schools, white and black parks, and other duplicate facilities for this area" (Koch and Fowler 1928, p57). Soon after the adoption of the plan, Austin's city council pursued this approach, providing a park, school, and sewer connections for African Americans only in this one section of the city. The council went on to duplicate the strategy for Latinos (Tretter 2012). In the 1940s and 50s (as I discuss in Chapter 4), the siting of segregated public housing followed a similar pattern.

Another tactic cities used to shape minority residential patterns was the use of eminent domain and the placement of public improvements. Abrams (1955) reports, "Sites abutting Negro developments have been acquired for railroad stations, incinerator dumps, urban redevelopment, public housing projects, roads, and similar improvements. These improvements sometimes tend to cut off the minority area from the rest of the city and stem the expansion of its living space" (p212). Such decisions became increasingly frequent as the federal government provided funds for redevelopment. As I show in Chapter 4, cities that spent more urban renewal dollars also became more segregated.

Cities also engaged in several strategies that enhanced/protected private decisions generating segregation. Chief among these was the refusal to deploy police forces to protect blacks from white violence when they sought to buy or rent homes in white neighborhoods. In many places, police routinely prevented the poor and people of color from setting foot in wealthy white areas at all (Meyer 2000, Myrdal 1944).[71] In some places, city governments took actions to aid the effectiveness of private deed restrictions (Hirsch 1983). For example, the mayor of Baltimore established a special Committee on Segregation to help coordinate deed restrictions in white neighborhoods. The committee included the city's building inspector, representatives from the health department, real estate agents, and neighborhood improvement association members (Meyer 2000).

Conclusion

This chapter has provided the first piece of quantitative evidence along with qualitative historical references that suggest that local governments influenced patterns of segregation by taking into consideration public goods provision as well as the wishes of wealthy business elites and white property-owning constituents. Local governments institutionalized prejudicial behavior and promoted segregation through the use of zoning ordinances.

Political elites enacted zoning ordinances in order to control the distribution of public goods in the city. They justified their zoning and segregation legislation with the argument that the poor and minorities had habits that were harmful to public health. One of the main goals of zoning ordinances was to create property values that were stable; this was highly supported by influential groups including home and landowners who did not want "others" settling in their

[71] As was the case with zoning, the use of police to support segregationists was variable. For instance, Meyer (2000) reports several examples of police providing support for black residents in New York City, St Louis, and Baltimore.

areas and decreasing the value of their investments. Local governments had no objections to keeping the property values high and stable, as this allowed them to refrain from raising taxes.

One major consequence that resulted from enacting zoning ordinances was that cities that adopted them early became more segregated in terms of both race and class lines. When cities restricted land use and the location of specific buildings, this created areas that were homogenous, leading to the reinforcement of inequality and social divisions.

In 1917, the Supreme Court ruled that zoning ordinances were indeed unconstitutional. This led many cities to turn their attention to comprehensive city plans and other forms of zoning that did not make outright segregation obvious. New comprehensive city plans were fueled by continuing race and class prejudice, and influenced the long-term shift from racial segregation to segregation by income level.

The historical references presented in this chapter support the argument that local government politicians used zoning as a mechanism to control the distribution of public goods towards their supporters and away from others, as well as create and maintain high property values in their cities. Zoning was an implemented effectively in areas where those in favor of zoning had political power to turn racial and class prejudice into legislation. Cities that were early adopters of zoning ordinances grew to be ten percent more segregated over the following fifty years than did cities that were not early adopters. The results also illustrate that zoning ordinances doubled the amount of renter segregation. In these early adoption cities, property values would also become more unequal by 1970.

Local governments used zoning ordinances as a mechanism to solidify, through institutionalization, existing racial hierarchies and prejudice, and this practice has had long-lasting effects. When cities could have used zoning to enhance the life of all residents, local

government officials catered to the private interests of their supporters and utilized policy tools including the placement of segregated amenities, public improvements, eminent domain, and redevelopment funds to protect and increase property values. The consequence of these practices was the generation of long-standing race and class segregation and prejudice.

Chapter 3: Inequality in Public Goods Provision, 1900-1940

Throughout the first decades of the 20th century, neighborhoods became increasingly homogenous along both race and class lines. By 1940, white/nonwhite segregation had increased by an average of 63%, while renter segregation increased by 54%.[72] Chapter 2 provided evidence that cities pursued race and class segregation in an effort to ensure the protected delivery of public goods to constituents with political power – namely land owners, realtors, developers, and white homeowners. Segregation served this goal because both local public goods and local political representation have a spatial component. While it is difficult to deny particular households access to sewer lines or a local public park, it is much easier to deny particular neighborhoods. Thus, as segregation geography shifted, so too did public goods inequalities.

Nothing about the existence of residential segregation necessitates inequality in service provision; it only makes it easier to produce if it is what city officials prefer to do. In fact, early planning advocates often argued that taking race into account when developing city plans was the key to *protecting* black communities and ensuring that they received, "all necessary municipal services – paving, city water, sewers, electricity, fire, and police protection…" (Knight 1927, p137).[73] While it was clear that public facilities would be separate, some planners insisted that there would be, "equal opportunities and facilities" (Virginia Law Review, 1928, p526). In most places though, inequality was the norm as, "housing segregation…permit[ted] any prejudice on the part of public officials to be freely vented on Negroes without hurting whites" (Myrdal 1944, p618).

[72] As described in detail in Chapter 1, renter segregation remained at lower levels than race segregation throughout this period.
[73] Knight, Charles. 1927. Negro Housing in Certain Virginia Cities, Publications of the University of Virginia Phelps-Stokes Fellowship Papers, Number 8

As Abrams (1955) explains, "though often merged into a single neighborhood, the ghetto was not always a slum nor the slum always a ghetto….the slum-ghetto was created when those of a single ethnic minority group lived not only in a ghetto but also in bad housing" (p76). Local governments contributed to the development of slum-ghettos by providing worse city services to neighborhoods populated predominantly by certain groups. Myrdal (1944) explains that the argument offered in support of these unequal allocations was the (erroneous) belief that whites paid all of the taxes, and so were therefore entitled to all of the benefits. It followed that, "whatever [Negroes] get is a charitable gift for which they should be grateful" (p336).

Over the long run, this pattern of government behavior contributed to the development of negative stereotypes about the people who lived in the slum-ghetto (e.g. that racial minorities or the poor, "*cause[d]* the deterioration of the places in which they live[d]" Hayward 2013, p64, emphasis in original). This is what Glenn Loury (2002) refers to as a "politically consequential cognitive distortion" because the disadvantage observed among a group of people is assumed to be, "intrinsic to that group when, in fact, that disadvantage is the product of a system of social interactions," which then leads observers to be opposed to policy solutions or systemic reform (p26). It was in the early part of the 20th century that the foundation for continuing inequality in the 21st century was laid. By building inequality into the physical landscape, cities added, "unprecedented durability and rigidity to previously fragile and fluid [social] arrangements" (Torres-Rouff 2013, p257).

In Chapter 2, I provided evidence that political power in the hands of opponents could slow or inhibit the enactment of such policies. A similar pattern existed with respect to the distribution of benefits. In many cities, political participation of lower socio-economic status groups and racial minorities limited the degree to which public goods were allocated unequally.

When these groups were able to assert political power through voting strength or in official positions, they received more benefits from municipal governments.

In this chapter, I show that between 1900 and 1940, neighborhoods that were identifiably poor or inhabited by minorities were allocated lower quality services including road paving, public health efforts, and sewer extensions. I draw on detailed data from Atlanta, Birmingham, Baltimore, Boston, Chicago, and Philadelphia to provide this evidence. Where relevant, I discuss mobilization efforts on the part of underserved groups that limited the extent of unequal allocation. I also show that in the case of sewer connections, this inequality persisted into the latter half of the century. Using data from all places included in the Census in 1970, 1980, and 1990, I provide evidence that where minorities and renters were more concentrated (e.g. in more segregated cities) they were less likely to be connected to public sewers.

A common argument promoted in the literature, as early as the 1930s, was that class, not race, was the more important determinant of inequality. A 1932 report commissioned by President Hoover stated, "These conditions of Negro housing in our cities are not the result of any willful inhumanity on the part of our society. On the contrary, they merely emphasize the present shortcomings of our individualistic theory of housing…The Negro's housing problem is part of the general problem of providing enough housing of acceptable standards for the low-income groups in our society" (Johnson 1932, p.viii). Myrdal (1944) also argued that, "in the North there is little, if any, direct discrimination…What inequality there is in the Negro's consumption of public services in the North is due mostly to poverty, lack of education, and other disabilities which he shares with other lower class persons in the region" (p335). Thus, the belief that blacks endured worse conditions than whites solely because of their lower socio-economic status, was widespread. As will be shown throughout this book, this was not true in

either the historical or modern period, regardless of the measures used or the region studied. Race and class exert powerful, independent effects on distributional outcomes.

Jim Crow and Public Goods Inequalities

Until the mid-1950s (and in some places long after), many Southern (and some Northern) cities generated inequalities in public goods by segregating access directly and then underfunding nonwhite services. Of all of the public goods residents sought to secure, none was as important as schooling. As of 1947, all southern states, along with Arizona, Indiana, Kansas, and New Mexico required or allowed segregation of schools (CQ Researcher 1947). Until the mid-1930's, about 75% of public school revenues were completely locally derived (Snyder 1993).[74] In the post-war period state and then later, federal government contributions rose. According to the data described in Chapter 1, localities spent an average of $103 (in 2012 dollars) per capita on schooling in 1902, representing about 35% of total expenditures. Per capita spending rose dramatically over the next 25 years (to $203 in 1927), but not as quickly as other expenditures. In 1927, schooling represented about 31% of local budgets. Until (and in some places even long after) *Brown v. Board of Education* was decided in 1954, racial segregation in schools was generated directly – that is, *residential* segregation was not needed to

[74] Technically, most schools in the United States are governed by approximately 13,000 independent, single purpose governments called school districts, rather than by cities. Not only are the governments that provide schooling and garbage service different entities, with separate budgets and separately elected officials, they do not often share the same boundaries. Today, only about one quarter of cities over 50,000 people have boundaries that are coterminous with a single school district (Fischel 2007). However, the 1902 Census Statistics of Cities reports that, "In most cities [included in the report] the schools are under the control of the city government, or of a school district, practically coterminous with the city" (p21). In his study of modern district boundaries, Fischel (2007) confirms that older cities are much more likely to have coterminous boundaries. It is for this reason that I include a discussion of schooling in this section. The figures cited in this paragraph combine revenue and expenditure for the municipality and the district as reported by the Census. However, it is not proper, even during this early period, to think of expenditures on schooling as being exchangeable with expenditures on other types of services. That is, increasing school spending did not directly impact funds available for policing, although one might imagine a theoretical budget constraint that the voters could impose on all governments. Due to a lack of clarity both theoretically and statistically, for the most part, I do not consider school district revenue and expenditure as part of the municipal budget in the remainder of this book.

ensure that whites and Blacks attended different schools. This was true in both the North and South. As one observer explained, "contrary to the general impression, this doctrine [of segregated schools] is of Northern and not of Southern origin. It originated in fact in the Quaker state of Pennsylvania and the abolitionist state of Massachusetts, and; although it repudiates any implication of a superior and an inferior race and insists on equal opportunities and facilities…" (Virginia Law Review 1928, p526). Litwack (1961) found that, "by the 1830s, statute or custom placed Negro children in separate schools in nearly every northern community" (p115).

In 1912, the Census reported expenditure data on schools separated by race in 40 communities. Unsurprisingly, white schools were better funded than black schools. I estimate that these cities spent about $4 per white resident and about $2.6 per black resident (in 1912 dollars).[75] However, the ratio of spending in black to white schools differed by region. While Northern black schools were not, as the Virginia Law Review implied, equally funded – it was the case that the disparities were greater in the South. For cities in the Midwest, the ratio was 0.846, compared to 0.685 in the Northeast, and 0.573 in the South.[76] School enrollments were also lower among black children. For the 1902-1903 school year, about 56% of black children were enrolled in school in Southern states, compared to 72% of white children (DuBois and Dill 1911, p24).[77] In some places with substantial black populations, no black schools were provided

[75] This is an estimate because I used linear interpolation to estimate the total white and Negro population in each city in 1912. The figure represents the total amount of funding for white and Negro schools reported by the Census divided by my population estimates.

[76] It is important to note that these data only represent a fraction of the communities with black schools or significant numbers of black school aged children (see discussion on page 122 in Financial Statistics of Cities Having a Population of Over 30,000: 1912). The 40 communities included in this special Census report spent less overall on schooling compared to other communities (about $3.6 per capita vs. $4.8 per capita). Compared to data reported in DuBois and Dill (1911), these figures appear to understate the discrepancy in funding between black and white schools.

[77] W.E. Burghardt DuBois, PhD and Augustus Granville Dill A.M., editors, The Common School and the Negro American: Report of a Social Study Made Under the Direction of Atlanta University, No. 16.

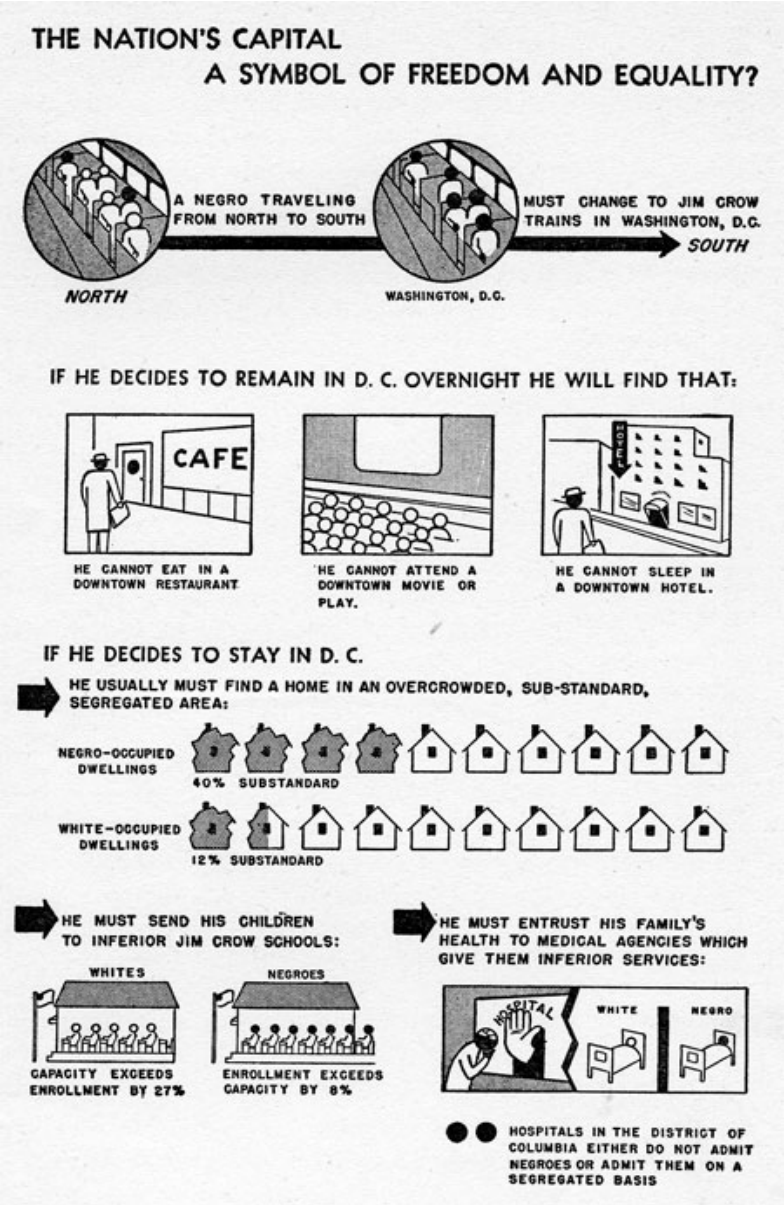
at all (Dubois and Dill 1911). Indeed, as Rabinowitz (1978) has argued, segregated schools actually represented an improvement in many communities because the alternative was complete exclusion – not integration.

Black schools had fewer teachers per child, shorter school years, and inferior physical infrastructure (DuBois and Dill 1911, Myrdal 1944). Teacher pay also differed substantially. For instance, in 1908 Georgia, the average teacher salary for whites was $45.47 compared to $26.37 for blacks (DuBois and Dill 1911). Despite similarly sized populations of white and black school children, Atlanta provided only 15 black grammar schools in 1920 compared to more than 40 grammar schools for white children. But not all white schools were treated equally. Schools serving poor whites (largely immigrants) were also, "older, less well equipped and often more overcrowded" (Myrdal 1944, p338).

Everywhere, blacks paid property taxes that were used to support white schools. Myrdal (1944) explains, "whenever the proportion of Negroes in the population is high, and the standard of Negro schools is kept well below that of white schools, the white educational system can derive substantial gains from segregation. Segregation makes discrimination possible; discrimination means lower expenditures for Negro schools, and the white population thus gets a vested interest in separation" (p341). In 1917, the Negro-at-Large series sought to catalogue reasons for the increasing Northern migration among Southern Blacks. The results of the organization's survey were printed in the Atlanta Independent. The third most important reason (after unhappiness with Jim Crow laws and disenfranchisement) dealt with inequality in school funding. The survey stated, "At present Negroes pay their proportion of taxes directly and a big portion in-directly through their rents, yet Negro schools receive in some cases less than 30 per cent of their just desserts" (reported in West 1976, p14).

However, the extent of inequality differed from place to place. DuBois and Dill (1911) report that in Washington D.C., where blacks sat on the Board of Education and held an assistant superintendent position, "there is no discrimination in the pay of teachers or in the requirements for teachers or in the course of study laid down" (p32). St. Louis and Baltimore both offered black high schools during this period. A 1954 study of inequality in education funding in St. Louis found that black schools were underfunded given their enrollment, but the difference was only about 5% and teacher pay was nearly identical (Russell 1954). In Atlanta, an active chapter of the NAACP sought to mobilize black voting power to improve public services in general and schooling in particular. In spite of a series of restrictions on voting (e.g. the white primary, poll taxes, etc.), the organization was able to register enough blacks to vote to sway some elections (Bacote 1955). In 1919, black Atlantans organized to defeat a bond package that would have solely funded white schools. So, in 1921 sponsors of the referendum sought black support in exchange for a black high school (West 1976).

Schools were not the only public good that was segregated directly during this period. Recreational facilities like parks, swimming pools, bath houses, and golf courses were also designated for white use only in many Southern cities. In Atlanta, blacks had three recreational sites compared to 22 for whites (Kruse 2005, p75). In 1954, The Atlanta Urban League calculated that whites had access to one acre of park land for every 155 residents compared to one acre of park land per every 1020 black residents. As a result, black parks witnessed severe overcrowding and much more rapid degradation (Kruse 2005). Myrdal (1944) writes, "virtually the whole range of…publicly administered facilities…are much poorer for Negroes than for whites" (p335). A graphic from President Truman's Report of the President's Committee on Civil Rights (Wilson 1947) makes the point visibly:



Although Jim Crow legislation was efficient at producing racial inequality, it was not perfect. As the Truman Report explained, "Following the *Plessy* decision, the Supreme Court for many years enforced with a degree of leniency the rule that segregated facilities must be equal. Gradually, however, the Court became stricter about requiring a show of equality"

(Wilson 1947, p82). Separate-but-equal facilities increased costs dramatically (Myrdal 1944). Additionally, some public goods could not be segregated directly. Troesken (2004) argues that, "because most cities and towns installed their water and sewer systems before 1920, during an era of relatively low residential segregation, it was difficult to construct systems that underserved African Americans without also underserving whites" (p91). As a result, he finds that the delivery of clean water and sewage disposal had a dramatic effect on lowering black mortality in the South. Furthermore, in some places, white public opinion had already begun to develop in opposition to overt racial prejudice and blacks were able to make headway in pursuing integration. Boston desegregated its schools in 1855 after sustained protest by blacks and abolitionist whites (Mabee 1968). By 1947, eighteen states had enacted antidiscrimination legislation prohibiting direct segregation (Konvitz 1947). Even some Southern cities (e.g. Atlanta) witnessed a significant local voice in opposition to Jim Crow (Kruse 2005). As direct segregation became untenable and the black population of these cities expanded, residential segregation became the obvious solution. Furthermore, unlike Jim Crow legislation, residential segregation permitted the separation of poor residents from wealthy residents in addition to the separation of residents of color.

Inequalities Generated Through Residential Segregation

When the nonwhite or poor community was segregated residentially, systematic denial of services was possible. A mid-century analysis of "American Negro, Puerto Rican, and Mexican" housing in large cities found that,

> "Garbage collections, building inspections, street maintenance, and other city services are less satisfactory than in other areas. The abnormal number of rat bites in Harlem, for example, may be ascribed not only to proper upkeep but to the ready supply of uncollected garbage in the streets. Southern cities and some in the North omit street paving and sidewalks in Negro sections. In hills sections the residents try to fill gullies in

> the streets with broken masonry, worn-out linoleum, and other trash" (Abrams 1955, p74-75).

In Birmingham, a committee of Black professionals protested the city's 1923 segregation ordinance saying that while blacks "would prefer to live to themselves," black neighborhoods, "are without the necessary sanitary arrangements, street improvements, lights, police protections, and the necessary comforts given other people in the municipality" (Connerly 2005, p44).

Among the most ambitious and expensive public goods that cities developed in the first decades of the 20th century were the delivery of clean water and removal of waste through sewer systems. Sewer and water mains were built along major roads, and homes located along these lines would have had the opportunity to be connected to the system. Troesken (2004) suggests, in a detailed analysis of Savannah and Memphis, that it appears that segregation, "facilitated efforts to underprovide African Americans with sewer and water systems" (p91). I build on Troesken's case studies by analyzing sewer and water extensions over time in four cities: Baltimore, Boston, Chicago, and Philadelphia. These cities all witnessed increases in racial and renter segregation between 1900 and 1940 and had data available on sewer construction.

To measure segregation, I calculated the *H* Index (as described in Chapter 1) for Baltimore, Boston, Chicago, and Philadelphia using ward-level demographic data from the 1900, 1910, 1920, 1930, and 1940 Censuses of Population and Housing.[78] For racial segregation, I use whites and nonwhites as the groups in the calculation of the measure. For class segregation, I use renters and homeowners. Table 3.1 shows each city's *H* index in 1900 and 1940 measuring white/nonwhite segregation and renter/homeowner segregation.

[78] In order to make these scores comparable to modern data, I adjust the scores using a correction factor to make the ward-level estimates similar to the tract-level estimates used in later decades.

Table 3.1: Segregation Increased in the early 20th C					
	Race			Class	
	1900	1940		1900	1940
Baltimore	0.43	0.60		0.07	0.12
Boston	0.33	0.52		0.09	0.11
Chicago	0.46	0.84		0.09	0.15
Philadelphia	0.29	0.44		0.04	0.09

If the argument that I have presented is correct, it should be the case that nonwhite and renter households should have been less likely to have access to water and sewer connections in more segregated cities. Unfortunately, I do not have the individual-level data to test this hypothesis. However, there are also aggregate implications of my theory. If elected officials were taking demographics into account when making decisions about where to build sewer extensions, we should we witness an interactive effect between segregation and the demographics of a neighborhood. As segregation increases, it should be the case that the share of residents who are nonwhite or renters should have a more powerful negative effect on new sewer extensions.

The data I use for this analysis were provided by the Center for Population Economics at the University of Chicago in the Historical Urban Ecological dataset (which is really a collection of many different datasets and maps). The dataset (Costa and Fogel 2015) includes ward boundaries for the four cities listed above between 1900 and 1930 and also includes a map of each city's sewer system. The sewer map includes the year different segments of the system were built. Using ArcGIS, I created counts of sewer segments in each decade for each ward and combined these counts with ward-level data from the Census of Population and Housing.

Observations are arranged by ward-census year. That is, each observation represents one ward in a city in a single year. The dependent variable in the analysis is the *Total New Segments*

built in each ward before the next census. The key independent variables are the share of each ward's total population that is *Black* and the share of occupied housing units that were *Rented* (as opposed to owned). These demographic variables are interacted with each city's *H index of segregation* (for race and class respectively) in a given Census year.

I control for the *Total New Segments* built in the city in each decade to account for the slackening pace of sewer development over time. I include the *Total Segments* built in the ward at the completion of the sewer system to account for the variation in sewer needs across wards. I also control for the proportion of those total segments that were built at the beginning of each decade in the variable *Percent Built*. Finally, I account for the share of the ward population that is *Foreign Born* to account for the possibility that city governments were providing fewer benefits to immigrant neighborhoods (which would have correlated with renter neighborhoods).

An important alternative (and undoubtedly true) explanation to rule out is that black and renting residents chose housing that lacked public services because it was less expensive. I do this by taking advantage of time. I explore the pattern of sewer line extensions in each decade between 1900 and 1940 given the racial makeup of each ward at the beginning of the decade. For instance, the total number of extensions built between 1900 and 1910 is regressed on the share of the ward that was black and the share that were renters in 1900. Because the dependent variable is a count of sewer segments, I fit a Poisson regression.

I was able to obtain data at the ward-level detailing racial makeup for every decade between 1900 and 1940, but data on renters is only available for 1900 and 1940. Because ward boundaries changed dramatically in some cities between these years, interpolation is not possible. Additionally, the Census did not tabulate data on renters in 1940 for the city of Chicago. As a result, adding the proportion of renters to the models significantly decreases the

number of observations. For this reason, I present the model without the inclusion of renters in the first model, and with the proportion of renters in the second.

The results, presented in Table 3.2, reveal a powerful negative relationship between the share of the ward that was black or renting and new sewer extensions in more segregated cities.

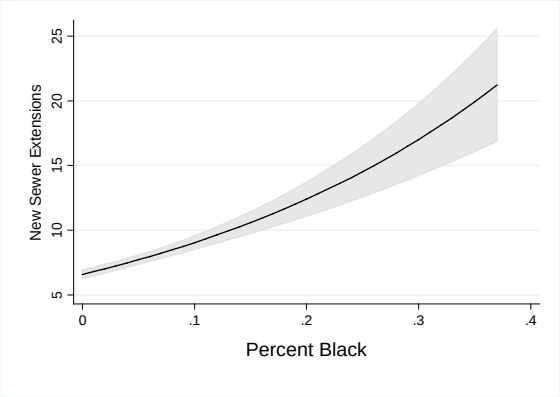
Table 3.2: Segregation Decreased Access to Sewers for Blacks & Renters

	β	Std. Error	P>|t|	β	Std. Error	P>|t|
% Black*Racial Segregation	-21.643	1.347	0.000	-11.811	2.002	0.000
% Black	9.429	0.676	0.000	6.713	0.925	0.000
Racial Segregation	1.874	0.082	0.000	-4.645	0.424	0.000
% Renters*Renter Segregation				-48.256	8.570	0.000
% Renters				3.654	0.765	0.000
Renter Segregation				58.505	6.510	0.000
Total New Segments	0.000	0.000	0.000	0.001	0.000	0.000
Total Segments	0.000	0.000	0.000	0.000	0.000	0.000
% Built	-3.275	0.044	0.000	-2.740	0.062	0.000
% Foreign Born	0.074	0.097	0.442	-0.411	0.198	0.038
Constant	2.611	0.048	0.000	0.651	0.521	0.211
N	541			271		
Pseudo R^2	0.788			0.748		

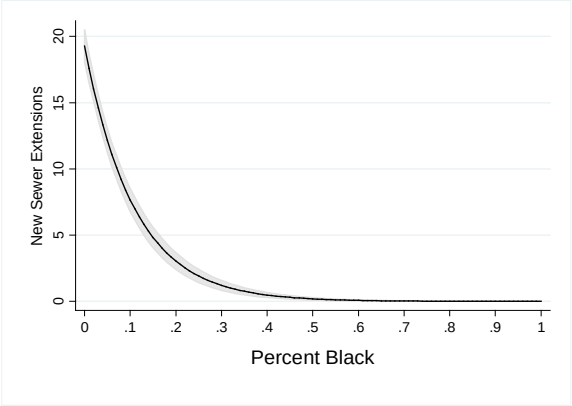
The data indicate that in more segregated cities, heavily black and renter wards were unlikely to receive new sewer lines. Figure 3.2 plots the predicted number of new sewer segments across the full range of black and renter population shares for the least and most segregated city-years in the dataset. The graph in the top right makes clear that majority black wards see no additional investment in their sewer systems. A similar pattern exists for wards with increasingly large renter populations in cities that were segregated by class.

Figure 3.2: Predicted Sewer Extensions at the Minimum and Maximum Level of Segregation

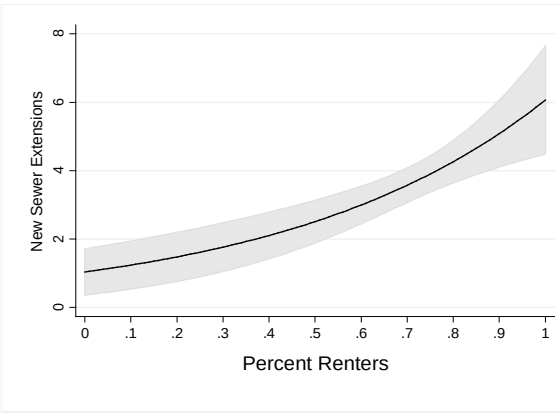
Minimum Racial Segregation (0.29)



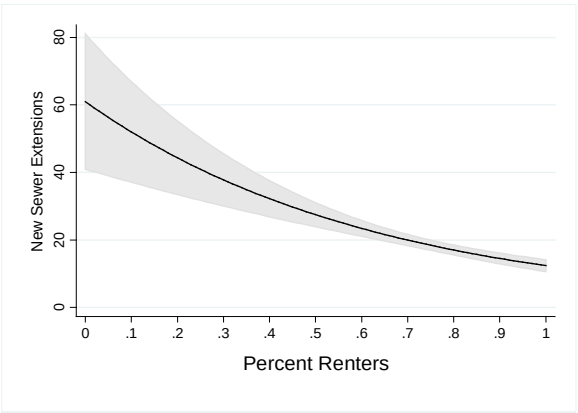
Maximum Racial Segrgation (0.86)



Minimum Renter Segregation (0.04)



Maximum Renter Segrgation (0.11)



In integrated cities however, the reverse is true: larger black and renting populations increase sewer line extensions. This may seem puzzling at first glance – but it is not. Troesken (2004) explains that the reason for this apparent generosity was self-preservation. He says:

> …discrimination in this arena was costly to white politicians and voters in at least three ways. First, given the networked structure of these systems it was difficult to deny service to African-American households and neighborhoods without also denying service to white households and neighborhoods…. Second, in a world where blacks and whites lived in close proximity, 'sewers for everyone' was an aesthetically sound strategy. Third, failing to install water and sewer mains in black neighborhoods increased the risk of diseases spreading from black neighborhoods to white ones (p9-10).

As a result, to the extent that sewer systems were built prior to rising segregation, variation in sewer system service did not disproportionately affect any demographic group. In Richmond, Virginia, neighborhood segregation actually declined between 1890 and 1930, and one contemporary observer wrote, "With the completion of the 1925 program practically the whole of Richmond was sewered and supplied with city water" (Knight 1927, p51).

In other cities, organized political action on the part of nonwhites and the poor mitigated inequalities. Bond passage in Atlanta required approval of two-thirds of votes cast and the two-thirds majority had to constitute a majority of registered voters – so by simply registering and not turning out, African Americans could ensure defeat at the polls (West 1976, Bayor 1996). In 1919, Black voters defeated a one-million-dollar bond package that was to provide, "for improvement of waterworks, a motorized fire department, erection of a museum at cyclorama, and the construction of a crematory with electricity generating facilities," after being told that, "blacks would receive no benefits from the measures" (West 1976, p13). When a new package was submitted to voters in 1921, it included $2,850,000 for water works and $750,000 for the viaduct (Atlanta Independent, February 24, 1921, p4). The mayor promised to appoint a special commission of colored citizens to advise the Bond Commission regarding the distribution of the

funds (Atlanta Independent, February 24, 1921, p4). On election day, Atlanta's "colored citizens…voted for every improvement named on the ballot" (Atlanta Independent, March 10, 1921, p4).

In some cities, sewers were built at the behest of property owners and developers. This was the situation in Birmingham and Los Angeles. In cities with this type of process, land-owners played a crucial role in the eventual sewer map. Because very few land owners were people of color, blacks in Birmingham and Mexicans and Chinese residents in Los Angeles lacked the opportunity to request sewer extensions or connections. While it might seem reasonable to explain inequality in access as the result of these economic differences, cities had other means by which to compel development. In Birmingham, sanitation and building codes were ignored in black neighborhoods (Connerly 2005), and in Los Angeles the city council ordered sewers to be built at the, "cost and expense of the several parties owning property along its route." However, they declined to compel sewer building in Sonoratown or Chinatown (Torres-Rouff 2013, p224; quoting Los Angeles City Council minutes, April 4, 1873). Because most Mexican and Chinese residents were renters, this refusal was a significant benefit extended to their landlords. As a result, in both cities, the absence of sewer and water service was concentrated in minority neighborhoods.

In this next section, I ask whether this unequal pattern of sewer development continued to affect minority and renting residents in the latter half of the 20th century. In order to investigate this question, I draw on the GeoLytics Neighborhood Change Database which matches and normalizes Census tract boundaries between 1970 and 1990. This normalization allows for direct comparison of tract attributes across time. I use this database to construct the race and

renter *H* index (as described in the previous section) for 4,566 incorporated municipalities and 800 unincorporated county areas.

The dependent variable in my analysis is the share of housing units in a given census tract that is connected to *Public Sewers*. My primary independent variables, similar to the previous analysis, are the share of the tract population that is *Nonwhite*, and the share of households that are *Renters*. These variables are interacted with each city's *H* index *of segregation* (for race and renters respectively) in each year. I control for the proportion of *Wealthy Families* in the tract (those earning incomes above the 90th percentile for a given Census year: $15,000 in 1970, $35,000 in 1980, $75,000 in 1990), the total *City Population*, and the total number of families connected to *Public Sewers* in the city. I include fixed effects for region and cluster the errors by city. The results are presented in Table 3.3 (summary statistics are in table A3.2).

Table 3.3: Nonwhite and Renter Sewer Access in Segregated Cities

	β	Std. Error	P>|t|
% Nonwhite*Racial Segregation	-0.261	0.069	0.000
% Nonwhite	0.164	0.037	0.000
Racial Segregation	0.122	0.035	0.000
% Renters*Renter Segregation	-2.643	0.854	0.002
% Renters	0.851	0.228	0.000
Renter Segregation	1.631	0.418	0.000
% Wealthy	0.254	0.105	0.016
City Population	0.000	0.000	0.000
City Public Sewer Connections	0.000	0.000	0.000
Midwest	0.053	0.013	0.000
South	-0.040	0.012	0.001
West	0.017	0.012	0.171
Constant	0.327	0.161	0.042
N	146,102		
R^2	0.327		

As was the case in the early period, between 1970 and 1990 renters and nonwhite residents continued to have inferior sewer access in more segregated cities. Of course today, overall sewer

access is high; the median census tract has 97% of homes connected to public sewers. The point demonstrated by this analysis is that both in the past and today, lack of access to public sewers is disproportionately concentrated among minority and renting residents.

Delivery of other public goods followed a similar pattern to sewer development and clean water provision. In 1900, 8,000 automobiles were registered in the United States; by 1940 the figure was 27.5 million (Federal Highway Administration 1997). But during this same period, actual spending on roads increased very little and dropped as a share of total budgets.[79] This meant that road paving distribution was an intensely political decision and different areas of the city were treated differently. One study of four Virginia cities reported, "a general lack of paving in the Negro residential areas" (Knight 1927, p53). In Los Angeles, Torres-Rouff (2013) explains, "many paved streets ran through the Anglo residential neighborhoods and commercial center but abruptly yielded to dirt as soon as they crossed into Sonoratown and Chinatown" (p226). A 1958 study of Birmingham analyzed white and black blocks in a single working class neighborhood and found that about a third of the black blocks had unpaved streets on three or four sides compared to only 6% of white blocks (Connerly 2005, p31).

As described in the introduction, mortality rates in cities during this time period, particularly the early years, were high. A budding public health movement sought to utilize government funds to address disease contraction and death. Cities created new public health departments, passed regulations regarding the storage and transport of milk, sent inspectors to stores and dairies, and engaged in large scale fumigation efforts. In all of these activities, white and homeowner neighborhoods were treated more protectively than neighborhoods inhabited by

[79] In a sample of 84 cities for which I was able to obtain data between 1902 and 1937, mean per capita road spending was $44 in 1902 (in 1912 dollars) and $43 in 1937. It reached a high of $51 in 1932. Road spending represented about 13% of city budgets in 1902 and about 8% in 1937.

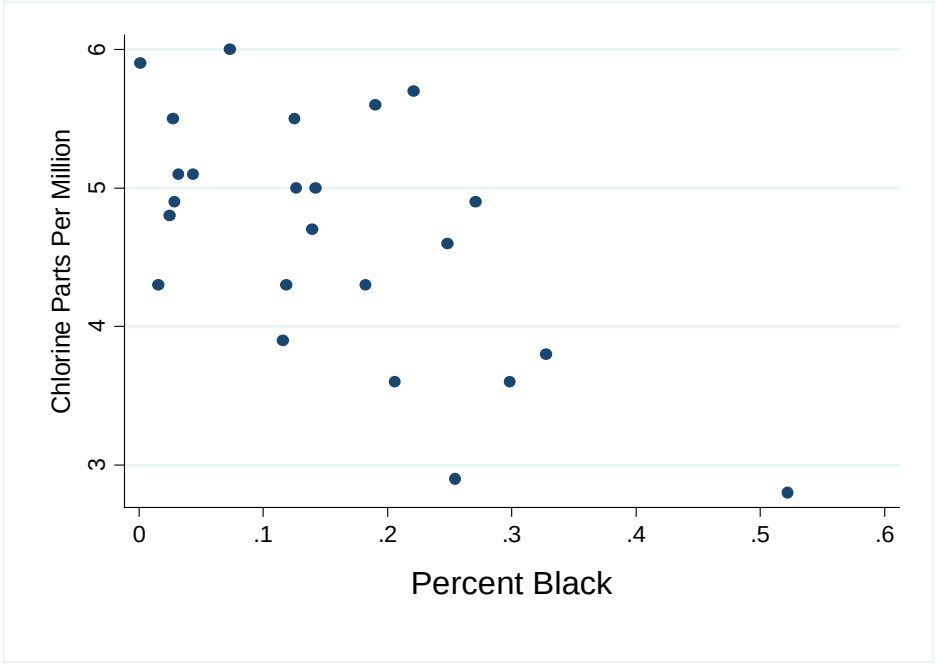
renters and minorities. In 1915, the nationwide infant mortality rate was 57% higher among nonwhites than whites. One study of 4 southern cities determined that nearly 1 of every 2 black babies died (Meckel 1990 p.142). Even still, black infants were "almost entirely" excluded from the "early part of the infant welfare campaign," (Meckel 1990, p142).

A 1914 analysis of Baltimore's Public Health department by the United States Surgeon General found that regulations were not enforced in the poorer parts of town. The report explained:

> An inspection was made by me of the stores selling milk in two of the districts of the city. One was located on the outskirts of the city in a good neighborhood…In every store the milk was sold in unbroken packages, was kept in a separate compartment of a large refrigerator and the conditions were as good as could be expected…The other district visited was of a different type altogether. It was located in the slums, among the foreign population. Here all the milk was sold in bulk under the most insanitary conditions. To make regulations here is practically hopeless. There are but three things to be done – stop the sale of milk in such places, establish a municipally controlled dairy within the district, or prohibit the sale of anything but bottled milk in original packages… (Fox 1914, p37).

In 1901, the Baltimore Health Department (reported in HUE dataset by Costa and Fogel 2015) reported an assessment of water quality in each ward. Only one ward had water that was classified as "Very Muddy" (as opposed to clear, fairly clear, cloudy, or muddy). That one ward was 52% black. The same ward also had the lowest level of chlorination in the entire city. In fact, there was a powerful negative relationship between chlorine parts per million and the share of black residents in a ward. Figure 3.3 provides a scatter plot of the data.

Figure 3.3: Chlorination of Water in Baltimore Wards, 1901



Not only were services provided differentially, but many cities engaged in a practice Rabin (1990) calls expulsive zoning: the placing of negative uses in minority neighborhoods. Kruse (2005) explains that as neighborhoods transitioned from white to black, city officials would assume that property values would fall and the area would become a slum. "Accordingly, planners and zoning committees lowered their standards for the region and began approving projects they would have routinely rejected if the residents were still white" (Kruse 2005, p74). A 1932 analysis of housing in one New Orleans neighborhood reported that, "The superintendent of the public school system used to live in this area but the white residents began to move out and then the city built a garbage incinerator over here, and all of the best whites moved out and the Negroes moved in with the poor whites," (Johnson 1932, p19). In Birmingham, city planners zoned black neighborhoods in flood plains and in industrial areas (Connerly 2005). Myrdal

(1944) reports that it was common to ignore criminal activity in black areas. As Muhammad (2010) explains, municipal authorities allowed crime to flourish in black neighborhoods as a service to white politicians and constituents. Doing so allowed whites access to prostitution, gambling, illicit alcohol and drugs while protecting white neighborhoods from the criminality. Because such operations were, "mostly owned, partially operated, and unofficially regulated by a largely white power structure" (Muhammad 2010 p.227), the benefits were captured by whites, while the negative externalities of vice were borne nearly exclusively by blacks. These strategies created conditions that lead later generations of planners to denote black areas as blighted slums, thus enabling the expulsion of blacks from these neighborhoods in redevelopment projects.

The historical record indicates that lower levels of segregation and more political power in the hands of blacks and the poor could mitigate such inequalities. Throughout the late 1880s, blacks held significant bargaining power in Atlanta city politics. Blacks were appointed to the nominating committees for city elected offices, and black votes were courted with promises of a black fire company, schools for black children, and street paving (Bacote 1955). After the white primary was struck down in 1946, blacks gained even more leverage in Atlanta politics. Black leaders had been pressing the city government for years to hire black police officers, "hoping to solve the problems caused by both the absence and the presence of white policemen" (Kruse 2005, p33), but their requests were ignored until they could marshal votes in city elections. In 1948, eight black patrolmen were hired (although they were only allowed to patrol black neighborhoods and could not arrest whites).

In Birmingham, many black neighborhoods formed active, dues-paying, civic leagues to lobby the city government for improved services. While they won a few small victories (the first city-owned park for blacks, some street paving and lighting, fire hydrant installation, sewer

extensions, and gas lines), they were mostly met with staunch resistance from the all-white government. One organization, the Harriman Park Civic League waited for four months to get an appointment with the public safety commissioner, Bull Connor. When the meeting finally occurred, Connor literally turned his back on the presentation (Connerly 2005, p221). In the late 1960s and early 1970s, as political power began to shift toward black residents, many of the requests brought by the civic leagues were finally addressed.

In Boston, Progressive Reformers attracted public support and won a series of institutional reforms between 1903 and 1913. Nonpartisan neighborhood organizations arose as powerful voices in municipal politics. The result was the consolidation of political power in the hands of middle-class homeowners (Connolly 2009) at the expense of working-class white ethnic immigrant constituencies like the Irish. However, the city was fairly integrated residentially along both ethnic and class lines during these years – and so, while political power shifted hands and the agenda changed, when neighborhoods won improvements like street cleaning and repair, playgrounds, libraries, or improved police protection, they benefitted all residents in the community, not just those with political power.[80]

Between 1914 and 1950, Boston was governed (on and off) by a staunch advocate of the poor and working classes – James Michael Curley. Curley was a machine-style politician, who was never able to consolidate a dominant citywide organization (Erie 1988). Many histories of this period note Curley's lavish attention to the city's, "working-class, ethnic neighborhoods" (Connolly 2009, p146). But the Census data from the period reveal that even the most heavily ethnic wards were actually fairly mixed. In 1930 for instance, wards ranged from 21% foreign

[80] Connolly (2009) argues that this shift in political power altered the agenda of city politics toward neighborhood improvement and away from issues that the working class prioritized like union protections and wage and pension increases (see pages 115-120) and also decreased participation among working-class voters.

born to 42%, and no ward housed more than 11% of the total foreign born population. So when Curley "ordered loans to clean and pave local streets, build a playground and bathhouse, and improve sewer and water serves" (Connolly 2009, p166) in the North End in order to woo Italian votes, non-Italian residents also benefitted.[81]

Yet, in many cities, even when residents and activists mobilized to lessen inequalities, "segregation [became] the cornerstone of the elaborate structure of discrimination against some American citizens," (Wilson 1947). Hayward (2013) explains that the, "black ghetto [was] subjected to systematic disinvestment, while collective investments in new residential and commercial structures, and in 'public amenities', such as parks and athletic facilities and well-built and well-equipped schools, disproportionately [were] channeled to places that were, first legally, then practically, restricted to those constructed as white" (p63). These inequalities contributed to a growing collective sense of whiteness and homeowner identity on the one hand (Sugrue 1996, Hayward 2013), and on the other hand, the hardening of stereotypes about the suitability of poor and nonwhite residents as neighbors. White homeowners believed that individuals who shared demographic characteristics with those who lived in disinvested neighborhoods would bring slum conditions with them wherever they lived. In 1951 and 1953, Rose Helper conducted 40 interviews with real estate agents in New York City and Chicago to learn about the, "reasons for excluding Negroes from white residential areas" (Helper 1969 p18). She reported that the agents believed that, "[white people] fear that their neighborhood will deteriorate if Negroes come because of their manner of living in other areas: they associate Negroes with the undesirable slum (dirt, noise, squalor, stealing, vice), something to be avoided

[81] One scholar (Puleo 1994) estimates that in 1920, 95% of the North End population was Italian (p116). Without detailed data regarding the exact location of Curley's benefits, it is impossible to know the degree to which they served other populations.

if possible" (p79). In response, white homeowners sought continued governmental protection of their neighborhoods. Over the next several decades they succeeded in this fight.

Conclusion

Between 1900 and 1940, America's cities became increasingly segregated along race and class lines. While renters and homeowners both became more concentrated, the most dramatic changes in segregation occurred between blacks and whites. These changes in residential living patterns changed the distribution of public goods. As cities became modern service providers, the allocation of public goods was intensely political. In the earliest years when no neighborhoods benefitted from paved streets or clean water, health and cleanliness did not differ dramatically from place to place. But as streets became sewered, paved, and lit, and as inspectors enforced building, sanitation, and health codes, some neighborhoods reaped the benefits while others, "continued to contend with dirt roads and open cesspools" (Torres-Rouff 2013, p227). As Torres-Rouff (2013) explains, "these decisions produced a city that physically imposed inequality on its citizens" (p227). Such choices would be consequential for the future as inhabitants of these neighborhoods came to be associated with poor living conditions. Today, evidence indicates that segregation is maintained by white homeowners' willingness and ability to pay a premium to live among white, educated neighbors (Cutler, Glaeser, and Vigdor 1999).

Chapter 4: City policy maintains/deepens segregation, 1940-1970

By 1940, segregation patterns in cities were well-established. The boundaries of minority neighborhoods were clearly defined and white prejudice against nonwhite neighbors was entrenched. As one Chicago realtor explained, our "firm has a policy where they won't sell to a Negro in an area where Negroes are not resident…the general public…is not willing to accept the Negro as a neighbor. That's the basis for our not selling to Negroes in this type of an area unless one Negro family is already in the block. You can't be censured then. A silly idea but that's life" (Helper 1969, p41).

The maintenance of property values was the typical explanation offered for these practices; a belief that had been cultivated by policies enacted by local governments and which quickly became a self-fulfilling prophecy. Blacks were seen as undesirable *neighbors* because the features of their *neighborhoods* became associated with individual members of the racial group. Whites came to similar conclusions about Chinese residents in San Francisco (Shah 2001, McWilliams 1964) and Latinos throughout the Southwest (Abrams 1955, Torres-Rouff 2013, McWilliams 1964). This was the case despite the fact that minorities and renters experienced poor neighborhood quality because of paltry municipal services, neglectful landlords, and the overcrowding that resulted from segregation, not from their own doing.

During the build-up of the war effort in the early 1940s, massive demographic changes rippled through the nation. African Americans moved to the North and West, and the war and agricultural industries attracted Latinos to cities and farms in the Southwest (Weaver 1948, McWilliams 1964). In the post-war period, city governments utilized policy instruments like urban renewal and the placement of public housing to prevent minority and poor neighborhoods from expanding into white areas, and to protect property values for white homeowners. At the

same time, tumultuous battles over racial integration (of neighborhoods, schools, busses, lunch counters, unions, etc.), the rising Civil Rights movement, and the passage of the Voting Rights Act, threatened to undermine white homeowners' control of the political system, distribution of city services, and ability to police the borders of their neighborhoods (Sugrue 1996, Kruse 2005, Self 2003).

A great deal of insightful, detailed historical research studying the Civil Rights movement, segregation, and suburbanization has been written about the postwar period and this chapter does not attempt to retell what we already know. Instead, here and also in Chapter 5, I focus on the role of city policy in the generation of neighborhood segregation and suburbanization. An important contribution of these chapters is to explore why, if the drivers of segregation and suburbanization are similar, do white homeowners choose one avenue of separation over another? I argue that policy control plays an essential role. When white homeowners lost the power to adequately guard their neighborhoods and dictate municipal policy and public goods distribution, suburbanization became attractive. First, I show that urban renewal was linked to increased race and class segregation in the postwar period. Then, I demonstrate that whites in racially segregated cities witnessed increasing threats to their political power, both electorally and more specifically, with regard to housing policy.

Urban Renewal and Segregation

In 1932, more than 80% of local revenues came from property taxes (Census of Governments Finance File). By the end of that year, nearly 750 homes were foreclosed every day (Gotham 2000). City government revenue plummeted. Mayors sought relief from Congress; organizing as the National Conference of Mayors and testifying in hearing after hearing about the dire need for federal subsidy (Ogorzalek, forthcoming). As part of its

response, Congress enacted housing legislation. With its first foray into this area, the 1934 Housing Act and establishment of the Federal Housing Administration (FHA), Congress had multiple goals –the reemployment of the construction industry, the shoring up of the financial sector, and the stimulation of home ownership. But these policies were *also* spurred by a commitment to residential segregation. As Gotham (2000) details, the major authors of the proposals under consideration were, "leading officials in the real estate and lending industries" (p303), most of whom, by this time, had come to view race and class segregation as a stabilizer of property values and therefore, made them a conscious goal of these policies. Thus, it should not be surprising that the FHA played a major role in the institutionalization of suburban segregation (Gelfand 1975, Jackson 1985, Massey and Denton 1993).

However, the next piece of housing legislation, enacted in 1937 as the Wagner-Steagall Housing Act, was a conscious turn *away* from these forces. The Wagner Act sought to, "provide financial assistance to the States and political subdivisions thereof for the elimination of unsafe and insanitary housing conditions, for the eradication of slums, for the provision of decent, safe, and sanitary dwellings for families of low income, and for the reduction of unemployment and the stimulation of business activity" (Wagner-Steagall Act 1937). To achieve these goals, the act established the United States Housing Authority (USHA) to, "make grants and loans to local public housing authorities, to enable them to build, own, and operate housing projects for families of low income," and importantly, to clear slums (Robbins 1937, p4). As such, the Wagner Act served as the first Congressional effort to assist in what is now commonly referred to as "urban renewal" – local efforts to address the ravages of time, revitalizing the "urban built environment" (Avila and Rose 2009, p339).

Whereas the establishment of the FHA and passage of the 1934 Housing Act were aimed at assisting those who *could* afford housing in the private market, the Wagner-Stegall Act sought to, "provide decent, safe and sanitary housing for that large group of our population who [could not] afford to pay enough to cause private capital to supply their housing needs" (Brabner-Smith 1937, p681). In addition to focusing on low-income residents, the Wagner Act also understood that, "any realistic approach to clearing slums and rehousing low income families would necessarily include a large number of Negroes as tenants" (Weaver 1940, p150). Thus, the USHA included an Office of Race Relations directed by an African American, Harvard-trained economist, Dr. Robert C. Weaver (Meyer 2000).[82] Weaver's office was charged with reviewing applications for federal funds to ensure that, "sound racial policy may be reflected in all projects" (Weaver 1940, p155). In a 1968 interview, Weaver recalled:

> The Public Housing Program was perhaps one of the outstanding examples of equity of treatment as between white and black Americans….In public housing we not only got approximately a third, as I recall, at one time of the units available to nonwhites--most of them were Negroes--we also got Negro managers, which was unheard of in places like Atlanta and Memphis and Jacksonville and in Miami. We were able in the North to get projects which were open to both Negroes and whites. This required some doing as early as 1937 to '38. These were the exceptions rather than the rules but they did occur. (Weaver Oral History 1968, p9)[83]

Reviewing Dr. Weaver's tenure, *The Crisis* (the official publication of the NAACP) reported, "As a result of his efforts and the support of USHA officials, a more fair and equitable racial policy now exists in USHA than in any other branch of the Federal Government. On the basis of need, Negroes are enjoying equitable benefits from public housing…" (October 1940, p319).

[82] Dr. Weaver was the first African American to earn an Economics PhD at Harvard. He went on to serve as the first black cabinet member as the Secretary of Housing and Urban Development.
[83] Available at http://transition.lbjlibrary.org/files/original/6404ca478ed6c3848eedaaf380acdb45.pdf

However, despite the fact that, "The United States Housing Authority…tried to set…desirable precedents in the field of practical racial relations" (Weaver 1940, p155), the seeds of segregation were embedded in the design of urban renewal; planted by the coalition that brought it to fruition.

The first of these seeds was local control. J. W. Brabner-Smith, Counsel for the Federal Housing Administration explained in 1937 that the, "problem is essentially local and should be decentralized as far as possible" (p.681). Allowing local governments to decide which land would be cleared and where new housing would be built virtually guaranteed the continuation and exacerbation of race and class segregation because white homeowners and land-oriented businesses controlled city governments and opposed residential integration along either race or class lines. Further, these interests quickly moved to ensure control of the new housing and renewal authorities created to direct and manage the process (Hirsch 1983, Sugrue 1996, Gotham 2001). Sugrue (1996) explains, "local governments had the final say over the expenditure of federal funds, the location of projects, and the type constructed" (p60).

In Chapter 3, I provided evidence that city governments underprovided city services and practiced expulsive zoning – the placement of negative uses (like garbage incinerators) in poor and minority neighborhoods. The land values in these areas were low; the environment was degraded. As a result, they were considered blighted. In the early 1930s, local realtors and bankers assisted the federal Home Owners' Loan Corporation (HOLC) in mapping property values of every block of every city in the nation (Gotham 2000). The HOLC's low appraisal of neighborhoods of color and large numbers of renters is well known (Jackson 1985, Weaver 1948). These areas too, were considered slums. In San Antonio, 82,000 Mexican Americans populated a 4-square mile neighborhood west of downtown. Many of the homes were wooden

shacks or converted horse stalls. Tellingly, the neighborhood lacked paved and lit streets, parks, and sufficient sewer capacity (obviously the doing of the local government). Annual flooding created a breeding ground for mosquitos (Fairbanks 2000). Neighborhoods like this *barrio* – predominately populated with people of color and renters – particularly those close to downtowns or homogenous white neighborhoods, were the first to be cleared (Hirsch 1983, Sugrue 1996).

At the same time, in order to preserve property values and access to FHA loans (which required racial homogeneity), white homeowners vigorously blocked the building of low-income and multi-unit housing in their neighborhoods (Weaver 1948, Sugrue 1996, Hirsch 1983). Weaver (1948) reports that even whites living miles away from proposed projects objected to their development on the grounds that their property values would be threatened. Nearly all new housing was provided on a segregated basis – that is, whites and nonwhites were not to live in the same projects (Weaver 1946). In order to provide enough units for racial minorities, and given the few sites that were available for building, many of the public housing projects were constructed as high-rise buildings – which, even at the time, were understood to be less desirable for the successful integration of people in need (Weaver 1946). Thus, as neighborhoods with large populations of renters and people of color were razed, these residents were displaced into even more densely segregated communities. In both the decisions regarding clearance and the decisions regarding the building of replacement housing, local control generated increased segregation.

The second important feature linking urban renewal to segregation was underfunding. Basil Stockbridge, Executive Assistant to the United States Building and Loan League, complained that, “it can readily be seen that the Authority’s activities will hardly scratch the

surface of the real needs of the country in eliminating urban slums and blighted areas" (Stockbridge 1938, p329). The Act required that the development of any new housing be accompanied by the razing of unsafe or insanitary dwellings, "substantially equal in number to the newly constructed dwellings provided by the project" (Wagner-Steagall Act, 1937, p5). But the new housing did not need to be located where the old housing had stood. Additionally, it was possible to raze more housing than was actually built. The lack of adequate funds meant first, that many slums remained, and second, that the number of new, affordable units was generally lower than the number cleared. Because of this, overcrowding in existing poor and minority neighborhoods worsened.

Furthermore, the receipt of federal funds required the local community to contribute funds for construction, typically in the form of land donation and property tax exemption, as well as funds for ongoing operation of the project (Levine 1941). Many cities eagerly accepted the federal dollars, but budgeted vastly insufficient amounts for the maintenance of public housing. So, even though by the 1950s most housing authorities stopped the explicit segregation of public housing tenants, and in some cases promoted peaceful race relations (Weaver 1946, 1956, Collins 2004), the degradation of the units meant that they had already become housing of last resort. Those who could avoid public housing did and preexisting segregation meant that it was whites who could most easily find housing in the private market.

As is true of all large government endeavors, the coalition in support of the Wagner Act and its later revisions was a collection of diverse, conflictual interests. These interests can be roughly categorized as those who emphasized slum clearance versus those who sought "public low-rent" housing (Ickes 1935, p109).[84] The former included business interests who held

[84] Although of course, there was diversity within these broad groups, see Marcuse 1995.

property in and/or relied on a healthy economic market in the downtown of cities, real estate elites, urban planners, homeowners, and local politicians hoping to increase the tax base (Zipp 2012, Ringelstein 2015, Avila and Rose 2009, Gotham 2001, Sugrue 1996). As one journalist representing this set of interests explained, "the housing problem is not merely one of replacing insanitary or unhealthful dwellings for large numbers of our people. More importantly, it involves the whole problem of progressive neighborhood decay, which for years has been eating like a cancer at the heart of every great city in America. The victims of this cancer are not only slum dwellers. In greater number these victims are taxpaying, home-owning families in neighborhoods from humble to well-to-do in all parts of the country" (Lewis 1937, p189).

On the other side were those concerned about the extreme housing shortages among lower-income residents, severe overcrowding plaguing minority neighborhoods, and the influence of slums on lax moral standards and community disorder (Dean 1949, Zipp 2012, Meyer 2000, Hirsch 1983). This group included many low-income and working class residents, people of color, organizations like the NAACP, institutions like the Chicago Defender, unions, and social workers (Meyer 2000, Gotham 2001, Compass 1936).

From the outset, slum clearance supporters, like the National Association of Real Estate Boards, were opposed to direct government provision of housing (Gotham 2001). However, much of the land that local elites viewed as blighted and sought to redevelop was residential, and the areas were often physically quite large. Razing the houses and assembling parcels required eminent domain, which required a clear public purpose. Public housing offered this justification, but only when *local* authorities engaged in the taking – thus necessitating local control.[85] Public

[85] In *United States v. Certain Lands in the City of Louisville* (1935) the 6th Circuit Court ruled that the condemnation of land for slum clearance by the *federal* government was unconstitutional because it did not constitute a use necessary to carry out the powers delegated to Congress. The Housing Act of 1937 thus moved to decentralize

housing advocates worried that local control over site selection and construction would exacerbate segregation (Meyer 2000), but without support from the slum clearance interests, public housing would have collapsed nearly as soon as it started for lack of funding (Marcuse 1995).

When the Wagner-Stegall Housing Act was revised and expanded in 1949 and 1954, power shifted toward the interests favoring slum clearance and segregation. Because the crisis of the Great Depression had abated, slum clearance was much more popular with voters and elites than was public housing (Fairbanks 2000, Zipp 2012).[86] As Gotham (2001) explains, these revisions, "represented the culmination of real estate industry lobbying efforts to curtail the production of public housing, create local redevelopment authorities with broad powers of eminent domain, and provide generous public subsidies for private redevelopment" (p297). By the time the last funds were allocated to local governments in 1974, the program had operated for more than 25 years as a mechanism to maintain and deepen segregation; it was termed the, "successor-weapon to the restrictive covenant and the racial zoning ordinance" (Abrams 1950). According to Collins and Shester (2013), urban renewal cumulatively resulted in the clearance of 400,000 housing units and 57,000 total acres; 300,000 families were displaced, about 54% of whom were nonwhite.[87] But, as we saw with racial zoning in Chapter 2, there was great variation in the local pursuit of urban renewal funds, and thus its effect on segregation.

To provide evidence of the relationship between urban renewal and segregation, I rely on a dataset gathered by Collins and Shester (2013). In their article, Collins and Shester (2013)

housing administration – requiring local housing authorities to be established to receive loans and grants from the federal government and engage in slum clearance and public housing construction (Freedenberg 1941).

[86] The Housing Acts were not the only mechanism cities used to engage in urban renewal, but patterns were similar with regard to other programs. For instance, Barrett and Rose (1999) provide evidence that local business, politicians, and real estate interests utilized highway construction to produce similar outcomes.

[87] Collins and Shester (2013) provide significant evidence that these measures accurately capture urban renewal activity undertaken by cities.

show that slum clearance and urban development programs had quantifiable *positive* benefits on city-level measures of income, property values, employment, and poverty rates. I seek to determine whether or not the program also increased race and class segregation. Collins and Shester's data represent all funds approved and disbursed under Title 1 of the 1949 Housing Act between 1950 and 1974. The data were gathered from the Department of Housing and Urban Development's Urban Renewal Directory. Cities applied for federal grants for particular urban renewal projects, and the directory listed the value of total approved and disbursed grants as of the date of publication. I add to these data each city's level of white/nonwhite and renter/owner segregation in 1980, measured using the *H* Index described in Chapter 1:

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents total population of neighborhood *n* or city *c* and E is the entropy (diversity) of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city (no segregation), and 1 where all neighborhoods contain only one group (high segregation).

First, I regress *Total Approved Urban Renewal Funds* (in hundreds of millions of dollars) as of 1974, on the *H* Index of *Segregation in 1950*. We should expect that cities with a strong preexisting propensity for segregation should have been the most eager applicants for federal funds. I add a series of city characteristics also measured in 1950 to account for the many demographic and environmental conditions that might have both led cities to seek urban renewal funding and be correlated with segregation. These controls include the proportion of housing units that were *Owner* occupied, *Median Home Value*, the share of housing units that were *Dilapidated*, the share that were *Built Prior to 1920*, and the share that lacked *Indoor Plumbing*. I include *Total Population*, the share of the population that was *Nonwhite*, median *Educational Attainment* of the population over age 24, the log of *Median Family Income*, the *Employment*

Rate, the share employed in *Manufacturing*, and the percentage of families with *Income Below $2,000* in 1949. These variables were all provided by Collins and Shester (2013). I add fixed effects for region, and report robust standard errors clustered by state. Collins and Shester provide data for all cities with more than 25,000 residents in 1950 and 1980 (482 in total), but I only have segregation measures for 172 observations. Tables 4.1 presents the results (summary statistics are in appendix Table A4.1).

Table 4.1: Relationship between Preexisting Racial Segregation and Approved Urban Renewal Funds

	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Segregation, 1950	2.49	0.551	0	1.205	0.321	0.001
% Owner occupied, 1950				0.004	0.005	0.456
Median Home Value, 1950 (log)				0.128	0.255	0.617
% Dilapidated, 1950				0.012	0.016	0.443
% Built Pre-1920, 1950				0.009	0.003	0.011
% Units w/o Plumbing, 1950				-0.005	0.005	0.342
Population (millions), 1950				0.706	0.098	0.000
% Nonwhite, 1950				0.005	0.006	0.422
% Employed Manufacturing, 1950				-0.002	0.004	0.539
% Employed, 1950				-0.019	0.023	0.419
Median Education, 1950				-0.028	0.062	0.655
Family Income, 1950 (log)				0.25	1.166	0.831
% Incomes Below $2000, 1950				-0.003	0.023	0.896
Constant	-0.237	0.162	0.152	-1.771	8.885	0.843
N	173			172		
R^2	0.227			0.679		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

Table 4.1 reveals that the application for urban renewal funds is strongly correlated with preexisting segregation. Those places that had a propensity for segregation were the most likely to apply for federal funding – even accounting for all of the physical factors that would have generated such applications. Topeka, Kansas, with a segregation index of 0.26 in 1950, applied for about $17.5 million in urban renewal funds over the course of the program. Kansas City, Kansas, where the segregation index was 0.54, applied for nearly $53 million. Atlanta, Georgia, with a segregation index of 0.67, applied for more than $100 million. In Richamond, VA, where

the segregation index was 0.51, city leaders only asked for $37 million. Salt Lake City, Utah with a segregation index of 0.18 applied for less than $5 million compared to Denver, Colorado's application of $83 million with a segregation index of 0.49.

Next, I analyze the effect of urban renewal funding on future levels of *Segregation* (*H* Index measured in 1980), conditional on preexisting segregation (*H* Index measured in 1950). The independent variable in these analyses is *Total Disbursed Urban Renewal Funding* (in hundreds of millions of dollars) as of 1974. I do not have data on renter segregation in 1950, so these analyses use the 1950 level of racial segregation as the control. Again, I present the models with and without demographic and environmental controls measured in 1950. Table 4.2 shows the results for racial segregation and 4.3 shows renter segregation.

Table 4.2: Relationship between Dispersed Urban Renewal Funds and Future Racial Segregation

	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Urban Renewal Funds ($100 millions)	0.073	0.021	0.001	0.073	0.029	0.014
Segregation, 1950	0.514	0.11	0.000	0.476	0.087	0.000
% Owner occupied, 1950				0.002	0.001	0.088
Median Home Value, 1950 (log)				0.118	0.043	0.010
% Dilapidated, 1950				-0.004	0.004	0.350
% Built Pre-1920, 1950				0.002	0.001	0.152
% Units w/o Plumbing, 1950				-0.001	0.001	0.165
Population (millions), 1950				-0.004	0.017	0.832
% Nonwhite, 1950				0.007	0.002	0.003
% Employed Manufacturing, 1950				0.003	0.001	0.003
% Employed, 1950				0.006	0.006	0.329
Median Education, 1950				0.007	0.014	0.642
Family Income, 1950 (log)				-0.292	0.187	0.127
% Incomes Below $2000, 1950				-0.001	0.004	0.726
Constant	0.017	0.032	0.609	0.469	1.578	0.768
N	172			171		
R^2	0.639			0.711		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

Table 4.3: Relationship between Dispersed Urban Renewal Funds and Future Renter Segregation						
	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Urban Renewal Funds ($100 millions)	0.023	0.006	0.001	0.020	0.009	0.037
Segregation, 1950	0.005	0.032	0.889	0.016	0.041	0.700
% Owner occupied, 1950				0.000	0.001	0.703
Median Home Value, 1950 (log)				0.059	0.030	0.060
% Dilapidated, 1950				0.000	0.001	0.676
% Built Pre-1920, 1950				0.000	0.000	0.464
% Units w/o Plumbing, 1950				0.001	0.000	0.052
Population (millions), 1950				0.003	0.011	0.761
% Nonwhite, 1950				0.000	0.001	0.997
% Employed Manufacturing, 1950				0.000	0.001	0.826
% Employed, 1950				-0.001	0.003	0.715
Median Education, 1950				0.016	0.007	0.032
Family Income, 1950 (log)				0.008	0.118	0.946
% Incomes Below $2000, 1950				0.001	0.003	0.800
Constant	0.129	0.013	0	-0.591	1.130	0.604
N	172			171		
R^2	0.229			0.334		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

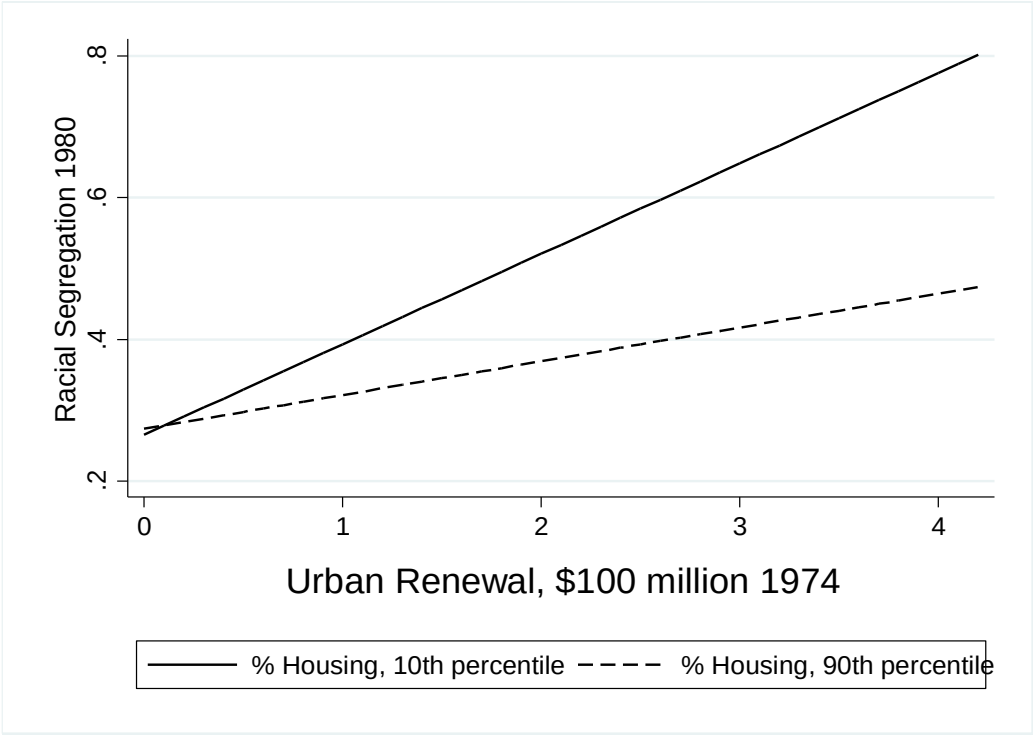
Tables 4.2 and 4.3 reveal that the vigorousness with which a city pursued urban renewal affected the level of segregation after the completion of the program (conditional on starting levels of segregation). The results are much more powerful for racial segregation than for renter segregation. Every additional $100 million in urban renewal funds is associated with a 7% increase in racial segregation, compared to a 2% increase in renter segregation.[88] As was the case for the effects of zoning shown in Chapter 2, local policy implementation is more tightly linked to racial housing patterns than class housing patterns.

This historical evidence indicates that cities varied not only with respect to their participation in the urban renewal program, but also in their investment in the ongoing maintenance of public housing. To investigate this possibility, I add to the data a measure of the

[88] Collins and Shester (2013) use an instrumental variable approach in their analysis. They estimate urban renewal funds with the number of years the city had access to the program as a result of state enabling legislation. Even more powerful results are evident when I replicate their strategy.

share of total expenditures each city spent on *Housing and Community Development Operations*[89] in 1972. I interact this variable with the measure of *Total Urban Renewal Funding* in Model 2 from Table 4.2 above.[90] I also add a control for the number of *Public Housing Units Per Capita* built under the Housing Act (from Collins and Shester) to account for differences in the need for maintenance spending.[91] Figure 4.1 reveals how urban renewal funding operated differently when cities invested in ongoing maintenance and when they did not.

Figure 4.1: Urban Renewal Interacted with Housing Operations



[89] This variable was constructed using the finance data described in Chapter 1. It is calculated as the total dollar amount spent on housing and community development minus housing and community development capital outlays, divided by total expenditure.

[90] Adding the interaction to Model 2, Table 4.3 (analyzing renter segregation) produces a similar effect that is smaller in size than the effect on racial segregation.

[91] Interestingly, the coefficient on this variable is negative – meaning that cities that had more public housing overall were less segregated. However, interacting the number of public housing units with urban renewal funding results in a positive coefficient. This indicates that slum clearance and public housing were both factors in the increase in segregation that urban renewal produced.

In cities that accepted urban renewal funds, but budgeted nothing for operations in 1972, urban renewal had a steep positive effect on racial segregation. In places that provided municipal funds for the maintenance of renewal sites, increasingly vigorous renewal expenditures had a much smaller effect on segregation. Of course, this analysis does not offer causal leverage. It is entirely plausible that the cities that were inclined to invest in maintenance had a social/political culture that led to a smaller increase in residential segregation for other reasons. Whatever the underlying cause was – cities that accepted federal funds without ongoing budget provision for housing operations segregated the most rapidly. This variation aside, generally speaking, where slums were cleared and public housing was built, segregation increased.

Yet, even while urban renewal was largely carried out to the benefit of white homeowners and land-oriented businesses, their control over public policy was not absolute; the rising Civil Rights movement threatened it significantly. As of 1960, not a single large city in the United States had elected a black mayor. By 2010, more than a third had (Vogl 2014). Changes to voter eligibility brought by the 24th amendment and the 1965 Voting Rights Act increased turnout of racial minorities and the poor during this period as well (Filer, Kenny, and Morton 1991).

I use data collected by Vogl (2014) to investigate the relationship between levels of segregation and interracial electoral competition. Vogl (2014) analyzes mayoral election returns between 1965 and 2010 for all cities that had 1960 populations that were at least 50,000 and 4% black (194 cities). His data record the race of the top two candidates (either black or not black) and their vote totals. I add segregation measures to Vogl's data resulting in complete data for

122 cities.[92] During the 1960s, only 13 black candidates sought the mayor's seat in Vogl's dataset; this number rose to 57 in the 1970s, and 84 in the 1980s. Interracial electoral competition was much more likely in more segregated cities. To show this, I regress a dummy variable coded 1 if the election was *Interracial* (e.g. featured a black candidate running against a non-black candidate) on the city's *H* Index of *Segregation* for the election year (interpolated between Censuses). I add the share of the city's residents that were *White* and the share *Renting* their homes, as well as the natural log of total *Population*, and a trend variable for the *Year* as controls. I use a random-effects logit model with errors clustered by city. I restrict the analysis to elections that occurred between 1965 and 1990 in order to focus on the post-war period. The regression includes 731 elections from 117 cities. Figure 4.2 shows the marginal effect of segregation on the probability of witnessing an interracial election, holding all other variables at their mean values.

[92] I am missing pre-1970 segregation measures for 20 cities in Vogl's dataset. I use 1970 segregation for the 36 elections between 1965 and 1970 for these places. Results are robust to the exclusion of these observations.

Figure 4.2: Segregated Cities Saw More Interracial Elections in the Post-War Period

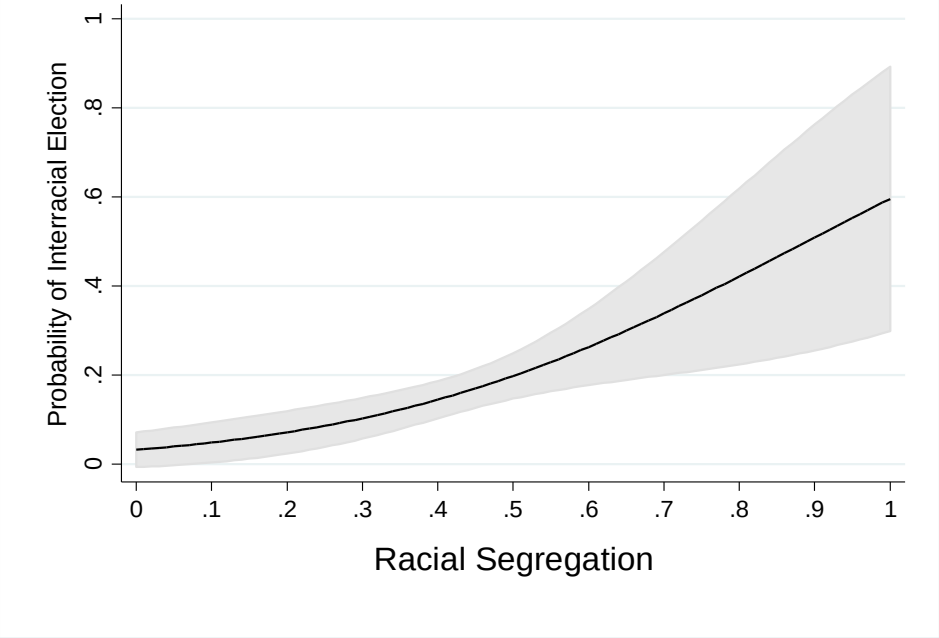


Figure 4.2 makes clear that racially segregated cities were much more likely to experience interracial elections – even controlling for the share of the population that was nonwhite. As will be shown in Chapters 6 and 7, segregated cities are also more likely to have racially divisive politics. Although the dividing lines were in place long before the 1960s, they became much more visible in electoral politics during the postwar period. Elections featuring black candidates (and white contenders) were contentious – driving up turnout among both blacks and whites, and decreasing margins of victory (Vogl 2014, Lublin and Tate 1995, Washington 2006). However, the vast majority of elections were still won by whites. Blacks only won 13% of the 731 contests reflected in Figure 4.2; moreover, these wins were concentrated in places with majority black populations. Although whites maintained power in

most cities throughout the 1960s and 70s, their hold was tenuous. This weakness became increasingly clear through the successes of the open housing movement.

In 1942, only 36% of whites said that they would not be bothered if a black person with their same income and education moved into their block (Schuman and Bobo 1988); the majority of whites, "expect[ed] a vigilant government to protect their segregated neighborhoods" (Sugrue 1996, p63). These beliefs were intimately intertwined with opposition to public housing, which was viewed as "Socialist housing" (Los Angeles Times, March 23, 1952 p E1); specifically, public housing was viewed as, "a taxpayer-subsidized handout for the feckless" (Sugrue 1996, p63). Although a majority of the poor in central cities were white, racial minorities were disproportionately poor and poorly housed.[93] Many whites opposed public housing because they feared, "a change in the racial character of the neighborhood" (New York Times, April 13, 1952, p28). Efforts to locate low-income housing in home-owner neighborhoods and/or integrate white areas was viewed as a government assault on owners', "right to protect one's own property" (Thomas, William P., Letter to the Editor, Washington Post, February 27, 1949).

In order to prevent integration in housing, white homeowners organized neighborhood associations, encouraged vigilant city inspectors to fine overcrowded minority homes, sent hundreds of letters to city governments, turned out in droves at public hearings, and engaged in violent assaults on black residents (Sugrue 1996, Hirsch 1983). But defending white, home-owner neighborhoods was a zero-sum game. For every area that successfully halted integration or low-income housing, another had to absorb (or block) it. This led to a lack of unity among segregationist forces. At the same time, support for scientific racial categorization plummeted

[93] About 62% of persons below the poverty line in central cities were white in 1959. Approximately 14% of whites were poor compared to 41% of blacks (https://www2.census.gov/prod2/popscan/p60-068a.pdf, p7).

(Hayward 2013), and outright, public expressions of racism were, "placed on the defensive" (Hirsch 1983, p175, Schuman et al. 1985).

Advocates of open housing began to win concessions from the government. By 1945, in more than 200 cities, municipal authorities dedicated to maintaining peaceful race relations, established interracial commissions, committees, or agencies that advocated for civil rights reform (Hirsch 1983, p42). These often appeared in the wake of violent riots (Meyer 2000). The racial restrictive covenant, long used by real estate developers and homeowners' organizations to keep minorities out of white neighborhoods, became unenforceable with a Supreme Court decision in 1948 (Abrams 1955). Even before this decision, some municipal judges were refusing to enforce covenants (Hirsch 1983).

Because the government owned and operated public housing, it was an obvious target for constitutional claims of unequal treatment. As early as 1944, New York City enacted an ordinance prohibiting tax-exempt status for housing projects that denied access to tenants on the basis of race. The ordinance had been spearheaded by the city's interracial relations commission. In other places, civil rights organizations pressured municipal housing authorities to integrate public housing; the NAACP brought this matter before the court (Meyer 2000, Sugrue 1996). In 1953, the California Court of Appeals ruled in *Banks* v. *Housing Authority of San Francisco* that San Francisco's Housing Authority must assign residents to public housing without regard to race or color. When the Supreme Court declined to hear the appeal (thereby allowing California's ruling to stand), the case became precedent-setting. By 1954, 21 cities had passed some form of anti-discrimination law (Meyer 2000) and in 1962, President Kennedy signed an executive order,

> directing Federal departments and agencies to take every proper and legal action to prevent discrimination in the sale or lease of housing facilities owned or operated by the

> Federal Government; housing constructed or sold as a result of loans or grants to be made by the Federal Government; and housing to be available through the development or redevelopment of property under Federal slum clearance or urban renewal programs (Papers of Burke Marshall, Assistant Attorney General for Civil Rights).

Not only did cities and states pass anti-discrimination laws covering public housing, some also enacted open housing legislation that sought to prevent discrimination in the private housing market. The leader of the movement was again New York City, passing an ordinance prohibiting, "race, creed or national origin" discrimination in rental housing in 1957 (Bennett 1957b, p9). The ordinance was, "bitterly fought by property owners and real estate representatives" (Bennett 1957a, p7) and explicitly exempted room rentals in single-family homes or duplexes unless they were located in large housing developments (Bennett 1957b). Still, the passage of open housing laws represented clear policy change, largely emerging from the bottom-up. By 1968, 22 states had enacted fair housing laws that covered nearly all sales and rentals (Collins 2006). Such laws were passed in response to vocal, mobilized advocates in black and liberal white communities (Collins 2006). The 1968 Federal Fair Housing Act extended this coverage nationwide.

Despite such policy progress, even as of 1973, the General Social Survey found 64% of white respondents believed that a homeowner should be able to, "decide for himself whom to sell his house to, even if he prefers not to sell to Negroes" (GSS 1973), and a homeowners' rights movement arose in response to the open housing laws. In Detroit, a collection of neighborhood organizations gathered more than 44,000 signatures in support of a homeowners' right initiative (Chicago Tribune, July 13, 1963). The ordinance passed but was declared unconstitutional by the Wayne County Circuit Court in a suit brought by the NAACP (Chicago Defender, December 23, 1964, Sugrue 1996).

In California, after the state legislature passed a fair housing law known as the Rumford Act in 1963, a statewide campaign for its repeal was led by the California Real Estate Association and the California Apartment Owners Association who combined to form the Committee for Home Protection (Self 2003, Duscha 1964, Turner 1964). Proposition 14, confusingly referred to as "The California Fair Housing Initiative," prohibited the state from, "denying, limiting, or abridging the right of any person to decline to sell, lease, or rent residential real property to any person as he chooses."[94] In an analysis of the campaign for Proposition 14, Self (2003) and Brilliant (2010) show that supporters rarely invoked race in their arguments, focusing instead on freedom and property rights. Reporting on the initiative battle, the Washington Post quoted a pamphlet issued by the Committee for Home Protection that stated, "Those who stand for the preservation of individual property rights today are in direct line of descent from the patriots who endured the hardships of the long winter at Valley Forge with George Washington" (Duscha 1964, pA2). Prominent Democrats including Governor Edmund Brown opposed the initiative, and a number of "right-wing Republicans" including Ronald Reagan and Barry Goldwater were "extremely active" in support of the initiative (Duscha 1964, pA2). In the end, the initiative passed with more than 65 percent of the vote, even as Johnson won the presidential race decisively (Greenberg 1964, p1).

Scholars have identified varying patterns of opposition to open housing in different places. For instance, Sugrue (1996) shows that in Detroit, the staunchest integration resisters were working-class white ethnics who owned modest, single-family homes (see pp236-237). In Oakland, Self (2003) finds that it was *not* solely, "an anti-liberal white working class engaged in direct struggle with African American," but rather middle and upper-class whites who,

[94] SALES AND RENTALS OF RESIDENTIAL REAL PROPERTY California Proposition 14 (1964). http://repository.uchastings.edu/ca_ballot_props/672

"understood property rights as sacrosanct expressions of their personal freedom" (p168). Collins (2004) shows that states with higher union membership rates were more likely to pass fair housing legislation and Self (2003) provides evidence that the UAW campaigned against Proposition 14, although Brilliant (2010) argues that rank and file union members were staunchly opposed.

To better understand the individual correlates of opposition to open housing, I gathered data from the 1964 Field Poll in California.[95] Carried out in seven waves between January and October, the poll asked respondents about their support for the Rumford Act and Proposition 14. I recoded these questions to into a variable coded 1 if the respondent *Opposed Open Housing*.[96] I use logistic regression to regress this variable on several demographics including whether or not the respondent *Owns* (vs. rents) her home, her *Race* (coded 1 for white and 0 for nonwhite or other), her *Age*, her level of *Education*, whether or not the respondent or her spouse belongs to a *Union*, and her *Economic Level* (with higher values representing lower classes).[97] In addition, I include a measure indicating whether or not the respondent planned to vote for the *Democratic*

[95] Ideally, I would have analyzed the relationship between community segregation and public opinion on open housing. Unfortunately, the Field Poll recorded no geographic identifiers other than the very broad categories of Northern and Southern California.

[96] For waves 2, 3, and 5, I used the question about the Rumford Act. In waves 1 and 7, no Rumford Act question was asked, so I used a question about Proposition 14 instead. Waves 4 and 6 did not include open housing questions. The text of the questions are as follows: (Rumford Act) Well, as you know the Rumford Act is a Law which makes it illegal for apartment house owners, owners of publicly assisted housing, and real estate brokers to discriminate against anyone because of race, color, religion, national origin or ancestry in the renting or selling of housing accommodations. From what you know of it, do you approve or disapprove of the Rumford Act?" (Proposition 14) "If you were voting today, would you approve or disapprove of this addition to the state constitution? (the amendment reads as follows – prohibits state, subdivision, or agency thereof from denying, limiting, or abridging right of any person to decline to sell, lease, or rent residential real property to any person as he chooses. Prohibition not applicable to property owned by state or its subdivisions, property acquired by eminent domain, or transient lodging accommodations by hotels, motels, and similar public places." Where possible, I use the question about the Rumford Act instead of Proposition 14, because the waves included very different wording of the Proposition question (adding more and less detail about the content).

[97] The coding of this variable is obscure. The codebook suggests that 10 categories were used and lists the following labels "upper," "upper middle," "upper middle," "middle," "middle," "middle," "lower middle," "lower middle," "lower," and "lower." One can only assume that the coders were instructed in some way to make distinctions across categories.

Presidential ticket (Johnson/Humphrey). I cluster the standard errors by poll wave. The results, presented in Table 4.4 paint a clear picture confirming and undermining various aspects of the historical accounts. Summary statistics are presented in Table A4.2.

Table 4.4: Demographic Characteristics of Open Housing Opponents			
	β	Std. Err.	P>|t|
Home Owner	0.193	0.065	0.003
White	1.205	0.412	0.003
Education Level	-0.177	0.035	0.000
Union Member	0.284	0.111	0.011
Age	-0.004	0.053	0.934
Economic Level	0.003	0.026	0.897
Democratic Presidential Voter	-0.896	0.386	0.020
Constant	0.33	0.334	0.323
N	4,860		
R^2	0.0575		

Note: Logistic regression with errors clustered by poll wave.

White homeowners were clearly in opposition to open housing, as were less educated respondents, Republicans, and union members. After controlling for these characteristics, economic status and age played no role in the determination of political opinions on open housing. Since the earliest years of the century, the most consistent opponents of integration have been white homeowners who came to view the protection of their neighborhoods as a right to be protected by government. These residents understood the "very essence" of Proposition 14 to be the avoidance of, "state involvement in private decisions in the sale of rental of privately owned residential property" (Blake 1964, pK1).

In 1966, the California Supreme Court declared Proposition 14 in violation of the Constitution, and the Rumford Act was allowed to stand. However, the lack of support for open housing among whites and owners would prove to be a formidable barrier for integrationists. Collins (2004) reveals that fair housing policy had little effect on black housing market outcomes

and did nothing to affect levels of segregation. The changes local communities experienced during post-war period would have other long lasting effects. When California voters overwhelmingly supported Proposition 14, they also overwhelmingly supported Johnson (over Goldwater) for president. Many contemporaries and scholars would explain this apparent inconsistency as Mark Brilliant (2010) does:

> Californians who voted *for* Prop 14 but *against* Goldwater were not so much signaling a wholesale rejection of civil rights…They were, however, hoisting a 'no trespassing' sign. They drew a line that cordoned off a more public sphere where the state could and should protect against discrimination from a more private sphere where no such state laws could tread (p206).

As Kruse (2005) so forcefully demonstrates, and I quantify in Chapter 7, this turn toward understanding neighborhood protection as a right (rather than a racist act), did not, in fact, represent an expression of newly discovered profound principles. It was, rather, a means to a segregationist end, and would serve as the rhetorical foundation for a rising conservative movement. More immediately, the rise of black candidacies, the advancements of the Black Power and Civil Rights movements, and the changes to public policy encompassed in the Voting Rights and Fair Housing Acts all threatened white control over central cities. At the same time, numerous federal and local policies made suburban living an attractive option – one that would offer white homeowners more complete control over the political arena. The next chapters offer evidence of these patterns.

Chapter 5: The Rise of Suburban Segregation, 1970-2011

In 2012, the Manhattan Institute issued a report entitled "The End of the Segregated Century," declaring that, "all-white neighborhoods are effectively extinct," (Glaeser and Vigdor 2012). Though not all demographers shared the optimism of Glaeser and Vigdor, many trumpeted the decline of neighborhood segregation in America following the release of the 2010 Census (Frey 2014). While segregation *between neighborhoods* has declined, another type of segregation has remained remarkably stable, even rising in the post-war period. Segregation *between cities* is persistent along both race and economic lines (Fischer et al 2004, Massey and Hajnal 1995). This means that while integration within cities has increased, cities as a whole have become less racially and economically diverse over time. As a result, a greater share of total segregation in metropolitan areas is now accounted for across cities rather than within them (see Chapter 1). This is what is commonly understood as the process of suburbanization.

While we have substantial evidence on the role federal policies have played in generating suburbanization (Jackson 1985, Massey and Denton 1993, Hayward 2013), our understanding of the ways in which local politics affects suburbanization has been limited. In previous chapters, I argued that segregation was pursued by local governments in order to enhance property values and make it possible to target local public goods towards white homeowners and land-oriented businesses. Such strategies, combined with political control of city councils and mayors' offices, ensured that local governments operated to protect the homogeneity of white homeowner neighborhoods and provide them with disproportionate benefits. In the post-war period, this control was threatened by increasing minority electoral participation and policy achievements. Here, I demonstrate that these changes contributed to suburbanization.

The analyses in this chapter rely on a measure of segregation that incorporates patterns of sorting both within cities and between cities and suburbs. This strategy offers an advancement over previous scholarship because it allows for a consideration of residential sorting at multiple geographic levels at the same time. Most scholars focus either on metropolitan level segregation (e.g. Dreier et al. 2004, Jackson 1985) or neighborhood segregation (e.g. Massey and Denton 1993) – but these types of sorting are intricately linked. By drawing on a nested measure of segregation for all metropolitan areas over a long time span (1980-2011), I am able to show that residents traded one type of homogeneity for another in response to political outcomes. I utilize time lags and metro area fixed effects to handle the problem of endogeneity, as race and class sorting can, in turn, generate different political outcomes (Massey and Hajnal 1995, Friesema 1969, Nelson 1992). In this chapter, I analyze the relationships between cities within metropolitan areas. I concentrate on the ways in which the politics of the central city (the city with the largest population in the metro area) affects demographic residential patterns in the suburbs. I find that when central cities elect minority mayors, when central city expenditures are higher and favor policing, a greater share of metropolitan area segregation is accounted for between cities rather than within them. I also show that in metropolitan areas where land use regulations are stricter in the suburbs than in central cities, more segregation is accounted for across cities. In short, when central city politics do not favor their interests, white and upper class residents are more likely to reside in different cities rather than in different neighborhoods and they lock in these sorting patterns through public policy. In the final section of the chapter, I show that communities with more whites and homeowners receive a disproportionate share of municipal spending.

Understanding the Link Between Segregation and Suburbanization

People choose where they live based, in part, on the types and quality of public goods and services provided in a community, as well as the taxes required to provide those goods and services (Tiebout 1956, Ely and Teske 2015, Banzhaf and Walsh 2008). However, not all residents are equally able to match these preferences with housing location. Low-income households have less choice than do high-income households because amenities (including schools, parks, and public safety) are capitalized into housing prices and rents. Racial and ethnic minority households have also been severely limited in their ability to live where they choose. In part, this is the due to the fact that minorities have lower average levels of income and wealth. But, as previous chapters have shown, it is also the result of concerted efforts by white homeowners to segregate them.

The long history of enforced racial segregation in America has been well documented. Between 1900 and 1940, neighborhood-level residential segregation expanded dramatically throughout the United States (Cutler, Glaeser, and Vigdor 1999). A variety of mechanisms ghettoized racial and ethnic minorities including violence and intimidation perpetrated by white residents, restrictive covenants written into housing deeds, and racial steering by real estate agents (McWilliams 1964, Sugrue 1996, Kruse 2005, Lassiter 2006). As previous chapters have shown, local, state, and federal policies also worked to establish and perpetuate segregation along race and class lines. Through actions like the passage of racial zoning ordinances (Chapter 2), the generation of neighborhood investment ratings through the Home Owners Loan Corporation (Hillier 2005), and official acquiescence to violent activity in protection of homes and neighborhoods (Hirsch 1983), governments pursued policies that limited the mobility of minority households (Ross 2008) between 1900 and 1940.

Around the time of the Second World War, patterns and strategies of segregation began to change. Segregation levels within cities leveled off, but ghettos grew much larger when minority populations increased in cities outside of the South (Cutler, Glaeser, and Vigdor 1999). Similar to previous decades, white homeowners utilized a variety of mechanisms to bar minorities and renters from moving to their communities. Organizing collectively through homeowners' associations, white homeowners controlled government decision making on matters such as the razing of slums, the rebuilding of downtowns, the placement of public housing, and zoning decisions that concentrated negative externalities in poor and minority neighborhoods.

However, as Chapter 4 revealed, starting slowly during the 1940s and then more rapidly during the 1950s and 1960s, white homeowners began to see their exclusive political control chipped away. The massive influx of wartime workers dramatically changed the racial and socioeconomic makeup of many large cities. In the 157 cities that had populations of at least 50,000 in 1940, the white population share declined about eight percentage points between 1940 and 1970 (from 90 to 82). By 2011, the white share of these cities decreased drastically to 52%. However, the share of renters *also* declined during this period, as homeownership rates expanded.[98] At the same time, black and Latino Americans' sustained battle for civil, economic, and political rights gained ground. As racial minorities began to contest and even win political representation, the open housing movement brought the possibility of neighborhood integration, and civil unrest coursed through many large cities. This period became fraught with uncertainty

[98] I only have time series data on homeownership rates for 60 cities. In these places, the share of homeowners rose from 35% in 1940 to 48% in 1970. Nationwide, the homeownership rate expanded from 43.6% to 63% during this period (Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1970). http://www.census.gov/library/publications/1975/compendia/hist_stats_colonial-1970.html

and fear for many whites placed an increasingly high value on segregation as they joined the ranks of homeowners.

Cutler, Glaeser, and Vigdor (1999) provide evidence that since the 1990s, white homebuyers' willingness to pay a premium for homogenous neighborhoods is the central factor perpetuating segregation. Overt racism has decreased dramatically over the last several decades (Schuman et al., 1997), but whites continue to express a preference for same race neighbors (Charles 2003) and minority neighborhoods continue to be perceived as having poor-quality amenities (Bobo, Kluegel, and Smith 1997, Ellen 2000, Emerson, Chai, and Yancey 2001, Krysan 2002, Bayer, Ferreira, and McMillian 2007). Ellen (2000) shows that a growing black population leads whites to leave neighborhoods and/or be unwilling to enter them. Card, Mas, and Rothstein (2008) report a distribution of tipping points (the size of the minority population that affects white population flows) ranging from 5% to 20%. Once a neighborhood reaches the tipping point, it quickly becomes predominantly inhabited by racial and ethnic minorities. White preferences for homogeneity are undoubtedly enhanced by persistent discrimination in the real estate and mortgage industries which limit minority access to some neighborhoods (Pager and Shepherd 2008, Gaslter and Godfrey 2005, Bobo 2001, Farley et al. 1994, Bobo and Zubrinski 1996).

However, while white preferences for white neighbors help to make sense of the fact that whites live in different *neighborhoods* than nonwhites, they do not help to clarify why whites live in different *cities*. Why, even as neighborhoods have grown more integrated, have cities become less so? The answer is politics and political control. Boustan (2010) finds that residents are willing to pay a 7% premium on housing in order to live in a higher-income suburb, in part, to gain access to higher school quality and lower property tax rates. Baum-Snow and Lutz

(2011) and Lassiter (2006) provide evidence that court-ordered integration of city schools led some white parents to seek out homogenous, suburban school districts. Kruse (2005) shows that when Atlanta's whites lost segregation battles and political control, many chose suburban homes. I build on the findings of these scholars to show that suburban sorting along race and class lines is also linked to central city elections of minority mayors, larger city budgets and a greater share of spending on police.

The rapid increase in the population of the suburbs during the post-war period was mostly not the result of white flight. Rather, rising incomes, low-cost federally-backed mortgages, the lucrative federal mortgage deduction, new housing construction in suburban tracts, and an extensive highway system all worked to bring residents to the periphery (Gotham 2000, Nall forthcoming). Yet, in the early decades of the post-war period, suburban living was much more accessible to whites and homeowners than to people of color and renters (Kruse and Sugrue 2006, Jackson 1985). This pattern eventually changed, allowing many racial minorities and renters live in suburban communities today (Frasure-Yokely 2016). However, as Briffault (1990) explains, "the increased heterogeneity of suburbia as a whole is usually not matched by a greater diversification *within* particular suburbs. There are now more poor and working-class people, more minorities and more industrial and commercial sites in suburbia. But poorer, working-class or black suburbanites are likely to live in different jurisdictions separate from those inhabited by affluent or white suburbanites" (p353). These trends have converged to increase divisions along race and class lines across city lines (C.S. Fischer et al. 2004, M.J. Fischer 2008).

In previous decades, processes of consolidation and annexation made city boundaries malleable so that those moving away from the center of the city would have resided within city

limits (Teaford 1979). However, in the post-war period, state annexation laws changed and political boundaries ceased to keep pace with residential spread (Briffault 1990). As a result, the number of incorporated municipalities in metropolitan areas grew and suburbs gained population, economic activity, and political power (Danielson 1976, Miller 1981, Burns 1994).

As independent municipalities, suburbs have the power to regulate land use for all parcels within their borders. Local governments employ land use regulations to manage the character of their community. Consequently, regulatory environments vary significantly from place to place. Cities are capable of enacting minimum lot sizes so that all development must be located on a certain acreage of land, requiring developers to preserve open space in their development, determining the number of multi-family units that will be allowed within city limits, requiring developers to pay a share of infrastructure improvements associated with new development, offering short/long review periods for zoning changes and building permits, and involving few or many local actors in the approval and planning process. Gyourko et al. (2008) find that there is a strong, positive correlation between different regulations. Specifically, if a city regulates in one area, it is significantly more likely to regulate in other areas as well. Einstein et al (2017) provide evidence that the accumulation of regulations reduces the supply of multi-family housing by allowing residents opposed to development to delay the process and file lawsuits. Gyourko et al (2008) also find that community wealth is positively related to regulatory environments. Places with high median home values, more college-educated residents, and higher incomes are most likely to police land use.

Public Opinion on Local Spending

In order for political preferences to be related to population sorting, it must be the case that different groups have different orientations toward government spending and different

policy priorities. At the national level, the gap between white and nonwhite support for government programs like social services, education, and assistance to the poor, as well as beliefs about the optimal size of government is persistent, systematic, and substantively large (Kinder and Winter 2001, Winter 2006, Jackman 1994, Tate 1994, Kinder and Sanders 1996, Dawson 1994, Bowler and Segura 2011). A related, but distinct gap between high and low socioeconomic status individuals also exists (Gilens 2005, Bartels 2008). Whites and the affluent tend to favor limited government while people of color and those of lower socioeconomic status are more supportive of spending and intervention. In an overview of this large literature, Hutchings and Valentino (2004) explain that the black/white opinion gap typically ranges from 35-50 points on matters dealing with race (like affirmative action and government aid to minorities), and more than 20 points on policies that are not explicitly racial, like government spending on welfare, social services, and education (see also Winter 2006, Federico and Luks 2005, Sears, Hensler, and Speer 1979, Kinder and Sears 1981).

There is less research on these questions at the local level, but scholars have found large racial and socioeconomic status divides with regard to candidate choice (Hajnal and Trounstine 2013b, Hajnal 2009), satisfaction with city services (Hajnal and Trounstine 2013a, Van Ryzin et al. 2004, Durand 1976), and trust in government (Rahn and Rudolph 2005, Marschall and Shah 2007). Hajnal and Trounstine (2013b) find that the largest divide in support for mayoral candidates is black versus white residents, with the divide between Latinos and whites close behind. The divide between Asians and whites is smaller, but persistent, as is the divide between high and low socioeconomic status individuals. In an analysis of the determinants of service evaluations among local residents, Hajnal and Trounstine (2013a) find that race stands out as the most powerful predictor. Again, the largest divides are between black and white and Latino and

white respondents, but class divides are also significant. In sum, white and wealthy residents tend to have more conservative spending preferences and support different candidates than do minorities and the poor at both the local and national levels. When political patterns favor nonwhite and poor interests, white and upper-class residents are inclined to select different localities. In the next sections, I provide evidence of these political contributors to segregation.

Measuring Suburbanization, A New Approach

In order to show that political outcomes affect segregation across city lines, I use a segregation measure that can be decomposed into within-city and across-city components. This measure allows me to take advantage of different predictions depending on the level at which segregation occurs and to control for aggregate preferences for homogeneity. In some metropolitan areas, whites and homeowners tend to be segregated from nonwhites and renters in different neighborhoods (indicating segregation at a low level of geography). In others, race and class sorting is more prevalent across city lines (indicating segregation at a higher level of geography). If a city increases its budget, there is no reason to believe that this would induce residents to sort into different *neighborhoods* but, I argue, it could lead to sorting into a different *city*.

While households may choose residential locations that result in more homogenous neighborhoods for a variety of reasons, only cross-city segregation ought to be affected by the *total* bundle of public goods provided by the city and the election of city officials. Because different racial and economic groups have different preferences for local representatives and policies, when budgets or election outcomes are less favorable to white and homeowner preferences, these residents should be more likely to sort into residential locations outside of city

boundaries.[99] We most commonly think of segregation across city lines as a process of suburbanization, but sorting between suburbs is another version of the same pattern. The result should be an increase in the share of metropolitan segregation across cities as opposed to within them.

To determine whether or not city political patterns favoring nonwhite and renter interests affect metropolitan segregation, I constructed a dataset measuring segregation in primary metropolitan statistical areas from 1980-2011 GeoLytics' Neighborhood Change Database (NCDB) and the 2007-2011 American Community Survey. These data allowed me to create a panel dataset measuring segregation at the census-tract level for each metropolitan area. To measure segregation, I use the *H* Index described in Chapter 1. The *H* Index allows for decomposition of within-city and across-city components.[100] It measures the evenness of dispersal of groups across geographic units (in this case, Census tracts, cities, and metropolitan areas).

The groups I use to calculate the *H* Index here are white/nonwhite, renter/homeowner, and wealthy/non-wealthy. Since 1980, the Census has tabulated the number of residents in each Census tract that self-identify as racially white and ethnically not-Latino; these individuals are classified as whites in my analysis. All other racial/ethnic combinations are classified as

[99] There is no evidence that the inverse is true. When budgets favor white/wealthy preferences, poor and minority residents have not been found to move to communities that prioritize their demands and needs. For instance, Levine and Zimmerman (1999) investigate the potential for states' welfare programs to act as magnets for the poor. They find little support for this hypothesis. The process of gentrification – where affluent residents return to the central city – is another scenario that could lead to movement among poor residents. Here too, scholars have found no evidence that gentrification leads poor households to leave their housing units (Vigdor, Massey, Rivlin 2002). The most likely explanation, of course, is that it is whites and the wealthy who have had the greater ability to choose where they live. Beyond this, political outcomes are typically much more responsive to the preferences of whites and the wealthy (Hajnal 2009; Gilens 2014).

[100] The approach is similar to the one taken by C.S. Fischer et al. (2004) who analyze trends over time in the level at which segregation occurs. In contrast to C.S. Fischer et al. (2004), I seek to determine whether such patterns are related to city policy choices, not just time.

nonwhites. The Census gathers tenure information on all occupied housing units, noting whether they are rented or owned. The share of units rented versus owned comprises my measure of segregation. Finally, the Census reports income categorically, not continuously, so wealthy refers to the share of families in each census tract with incomes above particular thresholds for each census year. [101] These thresholds were determined by calculating the average family income for all Census tracts in the United States for each Census year. The wealthy threshold represents the income bin with its starting point closest to the 90th percentile of the distribution. The thresholds for each census year are: $35,000 for 1980, $75,000 for 1990, $100,000 for 2000, and $150,000 for 2011. All families with this amount of income or more are included as wealthy.[102]

As explained in Chapter 1, the *H* Index measures the degree to which the diversity of subunits differs from the diversity of the larger unit, expressed as a fraction of the larger unit's total diversity and weighted by the subunit's share of the total population. For each census year, I calculate an *H* Index for all cities within a metropolitan area, denoted H_{m_c} and all tracts within each city, denoted H_{c_t}.[103] These *H* Indices reveal how diverse each census tract is given the diversity of the city and how diverse each city is given the diversity of the metropolitan area.

$$H_{m_c} = \sum_{c=1}^{C} \frac{P_c}{P_m}\left(\frac{E_m - E_c}{E_m}\right)$$

[101] I use family as opposed to household income because the NCDB does not report household income at the tract level.

[102] Census tracts range from 0 to 100% wealthy, with a mean of 18%, a median of 13%, and a standard deviation of 16%.

[103] Census tracts are perfectly nested within states and counties. However, in some cases tracts cross city lines. In these cases, GeoLytics assigned the tract to the city containing the largest share of the tract population. In 2011, tracts are weighted by the share of population contained in each city. Observations are unique when defined by year, tract, city, county, and metropolitan area. Tracts located in unincorporated areas within a metropolitan area are combined as a single unincorporated unit. Tracts outside of metropolitan areas are not included in the analysis. I use Metropolitan Statistical Areas and where possible, Primary Metropolitan Statistical Areas as the highest level of aggregation (not Consolidated Metropolitan Statistical Areas which are much larger).

$$H_{c_t} = \sum_{t=1}^{T} \frac{P_t}{P_c}\left(\frac{E_c - E_t}{E_c}\right)$$

P represents total population of the geography *t*, *c*, or *m*.

These two indices can be combined produce a total *H* Index for the metropolitan area which is equal to the *H* Index calculated for the metropolitan area at the tract level, H_{m_t}.

$$H_{m_t} = \sum_{t=1}^{T} \frac{P_t}{P_m}\left(\frac{E_m - E_t}{E_m}\right) = H_{m_c} + \sum_{c=1}^{C} \left(\frac{P_c}{P_m}\right)\left(\frac{E_c}{E_m}\right) H_{c_t}$$

I analyze the percentage of total metropolitan area segregation that can be attributed to cross-city segregation as opposed to within-city segregation. I have one observation per metropolitan area in 1980, 1990, 2000, and 2011. The dependent variable in my analyses is the share of total segregation in a metropolitan area that is determined by segregation across cities versus within them:

$$share_across = \frac{H_{m_c}}{H_{m_t}}$$

My argument is that city politics affects segregation patterns. Because I only have one measure of segregation for each metropolitan area, I analyze the effect on segregation of city politics in the city with the largest population in the metropolitan area. For example, in the Detroit-Warren-Livonia metropolitan area, I estimate the relationship between Detroit's city expenditures and the share of metropolitan segregation that is attributed to whites living in different cities than nonwhites (which happens to rise from 51% to 88% between 1970 and 2011). Table 5.1 provides aggregate descriptive statistics for the central cities versus non-central cities in my analysis as of 2011.

Table 5.1: Central vs. Non-Central Cities, 2011

	Central Cities	Suburbs
% White	58%	73%
% Black	19%	9%
% Latino	16%	12%
% Asian	4%	4%
% in Poverty	21%	12%
% Renters	47%	32%
Median HH Income	$42,796	$61,670
% Wealthy	9%	13%
N	323	4,145

The table reveals that suburbs are whiter, wealthier, and filled with more homeowners than central cities.

In Chapter 4, I argued that in the postwar period, white homeowner neighborhoods felt threatened by increasing electoral contestation by minority candidates and the successes of the open housing movement. Public opinion surveys reveal that racial and income groups are divided over the proper size of government. Further, studies have shown that white opinion on government spending is powerfully shaped by attitudes toward the group perceived to be the beneficiaries of the spending (Nelson and Kinder 1996). During the 1960s and 1970s many central cities became associated with rising crime rates (Wilson 1987). Today, whites link crime and criminality with blackness (Peffley Shields, and Williams 1994; Gilliam and Iyengar 2000, Gilliam et al 1996). For wealthy, white, homeowners with the ability to choose suburban living, it is plausible that the election of minority mayors, increases in the municipal budget, and shares of the budget going toward policing in central cities all may have played a role in encouraging segregation across city lines.

To analyze these relationships, I regress the share of metropolitan area segregation determined across cities on independent variables capturing political and policy control in the

central city. The first is a variable noting whether or not the central city had a *Minority Mayor* (African American, Hispanic, or Asian) at any point in the decade prior to the year in which segregation is measured. These data are from a number of different sources, including Vogl (2014), Hopkins and McCabe (2012), and my own research using websites and newspaper accounts of elections. The variable is a dummy variable coded 1 if the central city had a minority mayor and coded 0 if the mayor was white in all years of the prior decade. Next I add two spending measures: inflation-adjusted *Direct General Expenditure Per Capita* and the proportion of the city budget spent on *Policing.*[104] These variables come from the Census of Governments State and Local Government Finance files from 1977 to 2012.[105] The data are collected in years that end with 2 and 7 and I used linear interpolation to generate estimates of city expenditures in 1980, 1990, 2000, and 2011 to match the Census population data. I add the natural log of the *Population* as a control because large cities have different spending patterns than small cities and size may affect segregation patterns by offering residents greater ability to sort themselves into like neighborhoods. Finally, I add a measure of the *Violent Crime Rate* in the central city to capture local conditions to which both policy and movers might have reacted.[106] These data represent 209 metropolitan areas and include a total of 618 observations. Summary statistics are included in appendix Table A5.1.

There is an obvious endogeneity problem with the assertion that city elections and budgets can affect residential locations. That is, we know that as home-owning whites choose to

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[104] Police protection expenditures include, "expenditures for general police, sheriff, state police, and other governmental departments that preserve law and order, protect persons and property from illegal acts, and work to prevent, control, investigate, and reduce crime" Pages 5-58 in The U.S. Bureau of the Census Government Finance and Employment Classification Manual available at: http://www2.census.gov/govs/pubs/classification/2006_classification_manual.pdf

[105] [105]Available at http://www2.census.gov/pub/outgoing/govs/special60/. Filename is "_IndFin_1967-2012.zip"

[106] These data are from the Department of Justice Uniform Crime Reporting Program: Offenses Known and Clearances by Arrest reports for 1980, 1990, 2000, and 2011.

locate in the suburbs as opposed to central cities, the remaining central city population will have different policy and candidate preferences. The success of black mayoral candidates in this scenario is what Friesema (1969) called the "Hollow Prize." To attempt to mitigate problems this pattern might cause for the analysis, the mayoral data are measured in the decade prior to the segregation data and all of the remaining measures are lagged 10 years. Additionally, my analyses include fixed effects for metropolitan area, so that the estimated effects of politics are within, rather than across areas.

Is it the case that politics favoring nonwhite and poor preferences in central cities is associated with additional cross-city segregation? In short, yes. Table 5.2 presents the results.

Table 5.2: Effect of City Spending Patterns on Share of Metropolitan Segregation Attributed to Cross-City Segregation

	Racial Segregation			Renter Segregation			Wealth Segregation		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Politics favoring minorities & renters									
Minority Mayor	0.032	0.01	0.01	0.019	0.01	0.08	0.027	0.01	0.01
Direct General Expenditure Per Cap	0.052	0.01	0.00	-0.004	0.01	0.58	0.013	0.01	0.07
% Policing	0.723	0.14	0.00	-0.223	0.12	0.06	0.458	0.12	0.00
Controls									
Population (logged)	0.046	0.03	0.12	-0.057	0.03	0.03	-0.013	0.03	0.60
Crime Rate	0.566	0.13	0.00	0.134	0.11	0.24	0.159	0.11	0.15
Constant	-0.380	0.35	0.28	1.051	0.31	0.00	0.341	0.30	0.25
Number of observations	618			618			618		
Number of MSAs	209			209			209		
R^2 (within)	0.211			0.035			0.078		

Note: OLS Regressions, fixed effects for metro area included in all models
Minority mayor refers to previous decade, all other measures lagged 10 years

Table 5.2 tells a consistent story. When central cities elect minority mayors, when the spend more money, and when a larger proportion of their budget is spent on policing a larger proportion of the metropolitan area's total segregation along race and class lines is accounted for across cities rather than within them. In short, more liberal policy in the central city leads to more segregation across city lines while more conservative spending patterns in center cities lead to less. As Table 5.1 makes clear, non-central cities are whiter, wealthier, and more heavily populated with homeowners than central cities. This suggests that it is wealthy whites who make the choice to reside outside of the central city when policies favoring poor and minority interests are enacted. Conversely, wealthy white residents choose to remain in the central city when budgets are more austere. Overall, the results are strongest and most consistent for racial segregation. As has been true throughout this book, race is the clearer dividing line.

With regard to racial segregation in particular, the results are powerful. If we compare, on the one hand, a city with a white mayor in the 25th percentile of the distribution on per capita spending and police expenditure, to one with a minority mayor and in the 75th percentile on the

spending measures, the metro-area racial segregation accounted for across cities increases from 35% to 46%. This is equivalent to the difference between the patterns of segregation in the Wichita, Kansas area (*share_across_race* = 0.355), and the Waco, Texas area (*share_across_race* = 0.468) or the Charlotte, North Carolina area (*share_across_race* = 0.358) and the Portland, Oregon area (*share_across_race* = 0.465).[107]

Land Use Regulation and Suburban Segregation

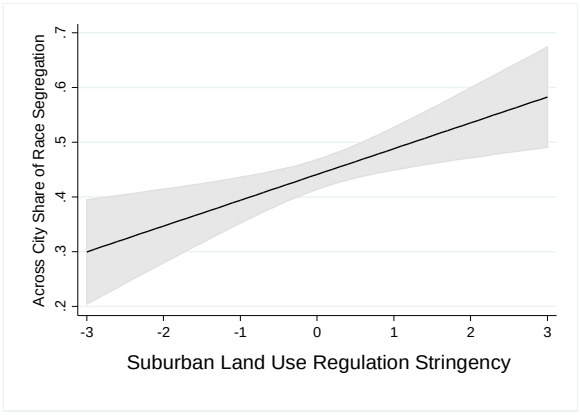
A number of scholars have emphasized the increasing role of land use regulation in the maintenance of segregation (Rothwell 2011, Pendall 2000, Orfield 2002). Scholars have often argued (although not demonstrated), that this tendency has generated a shift from the predominance of racial segregation toward class segregation (Mieszkowski and Mills 1993, Fischel 2004). The work that empirically investigates the relationship between land use regulation and segregation (e.g. Rothwell and Massey 2009, Glaeser and Ward 2006, Berry 2001) has not made a distinction between segregation within cities and segregation across them. This is an important omission, because homogenous suburban municipalities ought to be able to utilize land use regulation much more effectively than homogenous neighborhoods within cities, as municipalities wield more political power. If my argument is correct, that whites and homeowners seek to use local policy to protect home values and control the distribution of public goods, then metropolitan areas with more intense land use regulation in the suburbs should also have greater race and class segregation across cities. This is exactly what I find.

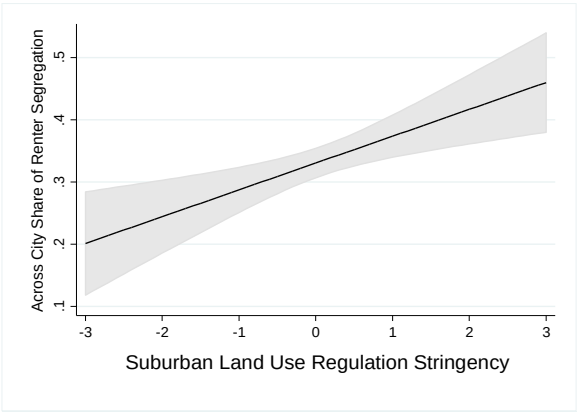
To provide evidence of this link, I use the Wharton Residential Land Use Regulatory Index (WRLURI) developed by Gyourko, Saiz, and Summers (2008). This index is built from a 2006 survey of local governments regarding the characteristics of the regulatory process, rules of

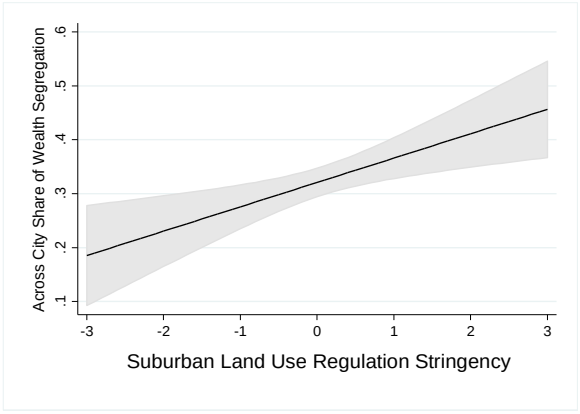
[107] These statistics are for the year 2011.

local residential land use regulation, and regulatory outcomes. These data were combined to measure the, "stringency of the local regulatory environment in each community" (Gyourko et al. 2008, p3). The survey contains data for more than 2,700 municipalities. For each metropolitan area, I determined the average WRLURI for all suburban communities. I then calculated the difference between the center city WRLURI and suburban WRLURI. This difference measure provides an estimate of the degree to which suburban municipalities have more stringent land use regulations than the central city for each metro area. I combined these data with the segregation measures described in the previous analyses – the share of the metropolitan area segregation accounted for across cities rather than within them. The WRLURI data are only available at one point in time, so I analyze the correlation between each region's *Share Across* and the *WRLURI Difference* in 2011 using OLS regression. Figure 5.3 displays the marginal effect of suburban land use regulation stringency on race, renter, and wealth segregation across cities.

Figure 5.1: Correlation Between Suburban Land Use Regulation Stringency & Segregation Across Cities







Suburban land use controls are significantly related to the degree to which segregation is accounted for across rather than within cities in metropolitan areas. The graphs also make clear that there is no difference between the effects of land use regulation on race versus class segregation. They are equally effected.

I've argued that white homeowners institutionalized segregation in order to protect their public goods and property values. The result of these policies in the post-war period has been to increase the disparity in service provision across cities. To show this, I draw on the same spending and segregation data described in the previous section. First, I aggregate all inflation-adjusted expenditures per capita by metropolitan area, for each year. This total expenditures per capita variable represents the collective dollars spent by municipal governments in a metropolitan area. I divide each municipality's expenditure by this total to generate the share of metropolitan spending accounted for by each city. I calculate a similar measure for population, generating the share of metropolitan population accounted for by each city. The ratio of these two quantities, the *Spending Equity Ratio*, is my first dependent variable.

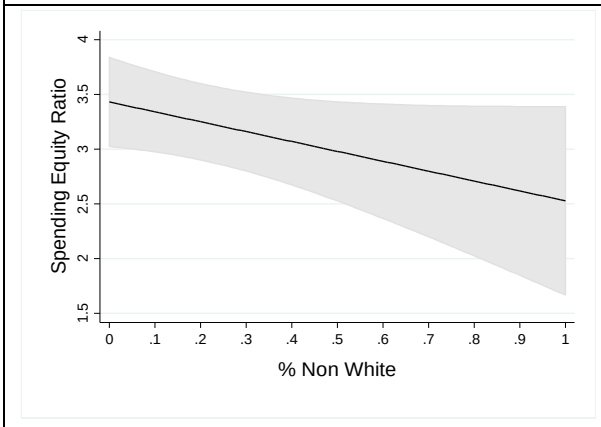
$$Spending\ Equity\ Ratio_j = \frac{E_j/E}{P_j}$$

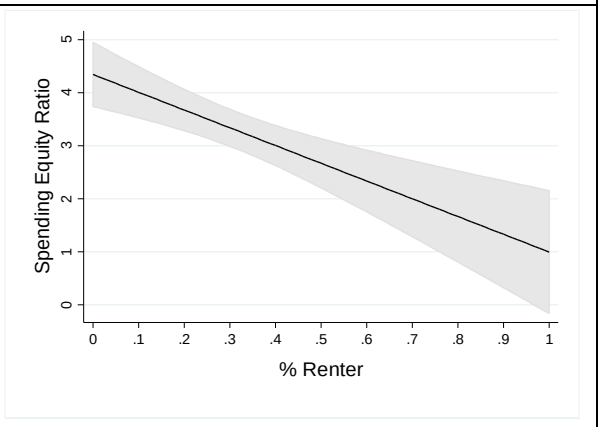
Where E_j is the per capita expenditure by city j, E is the total expenditures in the metropolitan area, and P_j is the share of the metropolitan population represented by city j.

This ratio measures the disparity between the percentage of the population represented by a city and the percentage of total resources received by that population. If resources are distributed exactly equally across the population, the ratio takes a value of 1; values less than 1 indicate that the community receives fewer resources than its population size would predict, and values greater than 1 indicate an abundance of resources. Between 1972 and 2012, this measure averaged 0.4 for central cities and 2.5 for suburbs.[108] Suburban residents receive two and a half times the resources that their population share justifies, while central city residents receive less than half of the amount of resources that their population share justifies. This is the case despite the fact that central cities spend more, on average, per resident than do suburbs. Unsurprisingly, communities with larger populations of racial and ethnic minorities and more renters have a lower *Spending Equity Ratio*. Regressing the *Spending Equity Ratio* on the share of the city that is *Nonwhite* and the share that *Rents* their homes, including fixed effects for years and errors clustered by metropolitan area, yields Figure 5.2.

[108] Calculated for all cities with more than 1,000 residents and all metropolitan areas in which I have data on more than one city.

Figure 5.2: Effect of Race and Class on Spending Equity





Given that cities with more homeowners and more white residents are more likely to garner a larger share of total resources spent in metropolitan areas, we should also expect that metropolitan areas with more segregation along race and class lines will witness more variation in spending from city to city. This is exactly what I find. My dependent variable in this analysis is a measure developed by Rhode and Strumpf (2003) called the coefficient of variation (CV). The CV captures the degree of heterogeneity in spending for a metropolitan area. It is calculated as the ratio of the standard deviation of spending to the mean of spending.

$$CV_{msa} = \frac{\sqrt{\sum_j P_j \left(E_j - M\right)^2}}{M}$$

Where E_j is the per capita expenditure of city j, M is the mean per capita expenditure for all cities in the metropolitan area, and P_j is the share of the total metro area population in city j. Rhode and Strumpf (2003) use this measure (calculated for the entire nation, not by metropolitan area) to show that over time, governments across the United States have grown more alike in their spending. I find the same – the mean CV declined about 17.5% between 1972 and 2012, from

1.32 to 1.09. However, more segregated metropolitan areas changed more slowly than less segregated areas. To see this, I regress the CV on racial, renter, and wealth segregation across cities (H_{m_c}). I add fixed effects for year to account for the declining time trend. Table 5.3 presents the results.

Table 5.3: Correlation Between Spending Heterogeneity and Segregation

	Column 1		
	β	Std. Err	P>|t|
Racial Segregation Across Cities	1.02	0.321	0.001
Renter Segregation Across Cities	1.83	0.661	0.006
Wealth Segregation Across Cities	-0.086	0.917	0.925
Constant	1.295	0.066	0.000
N	3149		
R^2	0.031		

Note: Fixed effects for year included but not presented.

The data reveal that metropolitan areas with more racial and renter segregation across cities – that is, where whites/ nonwhites, renters, and owners tend to live in different municipalities, we see more heterogeneity in municipal budgets. Combined with the results presented in Figure 5.2, we can see that communities with large populations of renters and racial minorities in segregated metropolitan areas have access to a much smaller share of the total dollars spent by local governments. Segregation is correlated with inequality; exactly as its architects intended.

Conclusion

Even after decades of progressive change in racial attitudes and growing concern over income inequality, America remains a segregated nation. Increasingly, segregation along race and class lines has occurred among cities rather than within them. I have argued that city politics has played a role in this change. Overall, whites and the wealthy individuals seek smaller, less

active local governments. When city policy does not favor their interests, these types of residents are more likely to trade homogenous neighborhoods within cities for homogenous cities instead. When central cities in metropolitan areas have more active policy agendas, when they spend more on community development, and when property taxes are higher, we see greater segregation across city lines. Whether this is because white homeowners leave central cities or never move in, the result is a higher degree of separation between cities in metropolitan areas. These patterns become fixed by suburban land use regulations that shape the character and structure of these communities.

Chapter 6: Segregation and Public Goods Provision, 1982-2012

Chapter 5 revealed that suburbanization has produced inequalities in spending patterns from city-to-city and I have argued that this was precisely the goal segregations' proponents. But segregation has another set of consequences that we might say were unintended; consequences for the polarization of politics at both the local and national levels. This chapter and the next make a case for this claim.

Many United States cities function without regular problems. They have well-kept roads, sewers that never overflow, and public parks with swing sets and restrooms. Others, however, struggle to maintain balanced budgets, fail to adequately equip or staff their police forces, and offer little assistance to residents of limited means. What explains these differences? One obvious answer is simply wealth. The history of suburbanization detailed in previous chapters suggests that whites and homeowners have ensconced themselves in homogenous municipalities. Given the strong correlation between race, property ownership, and wealth, income differences across communities could explain much of this variation. Except they don't. Although the relationship is statistically significant, the correlation between city level median income and per capita direct general expenditure is only about 0.037 in my data.

At a very basic level, the generation of public goods requires cooperation. Why is it then that some cities find it more difficult to cooperate than others? Scholars have identified racial/ethnic diversity and changes in diversity as prime suspects in determining under-provision of public goods (e.g. Alesina et al. 1999, Hopkin 2009). Nonetheless, diversity alone does not generate a lack of cooperation in city politics. It is only when cities are also segregated along racial lines that we see lower public goods provision. Segregated places are politically-polarized places. The gulf between whites and minorities in segregated places makes it less likely that

they will find common ground in support of a bundle of taxation and expenditures, driving down collective investment. It is segregation, not diversity that contributes to inequality.

I provide evidence for this argument using election data from 25 large cities between 1990 and 2010 and demographic data matched to city finance data from 1982 to 2012 in more than 3,000 cities. To handle the problem of endogeneity in the finance analysis, I instrument for segregation using the number of waterways in a city. I find that segregated municipalities spend less on a wide range of public goods. This lower spending has consequences. In the final section of the chapter, I find that racially segregated cities also have more sewer overflows per capita.

I focus here (and in the next chapter) on racial segregation alone. A series of tests revealed that renter and wealth division do not produce similar results. These findings are bolstered by the historical evidence which indicates that it is race and not class division that generates the starkest conflicts in city politics. Throughout, I control for indicators of wealth and homeownership to ensure that the results are not conflating race and class.

Literature and Hypotheses

Local politics, more so than national or state politics, concerns battles over space. This is because local governments control the location of negative and positive externalities (like pollution-producing factories or public parks) and also because many of the functions that local governments provide are allocational in nature (e.g. where police officers will be deployed and which roads will be repaved). One of the few powers that is reserved nearly exclusively by local government is that of zoning or planning. As a result, geographic areas within cities (e.g. neighborhoods) are frequently important actors in municipal politics.

At the same time, neighborhoods in America remain highly segregated along racial lines (see Chapter 1). Although neighborhood racial segregation has lessened in recent decades, today, the typical white American lives in a neighborhood that is overwhelmingly white, while Black, Latino, and Asian Americans live in substantially more integrated places (Logan and Stults 2011).[109] These patterns have created stark divides between white and nonwhite communities (Enos 2011). When a city is residentially segregated by race, issues cleave along racial and not just spatial lines (Massey and Denton 1993).

Furthermore, in segregated cities, divisions across racial groups are likely to be exacerbated because the political priorities and opinions of racial groups are likely to be more divergent than they are in integrated places. Neighborhood racial isolation is associated with a high degree of racial intolerance, resentment, and competition among all racial groups (Oliver 2010, Chapter 7). This correlation is due to both self-selection and interpersonal interactions (Rodden 2010). When deciding where to live, people with racially intolerant attitudes often seek same race neighbors (Charles 2003, Boustan 2012) either because they want to minimize contact with other race individuals (Massey and Denton 1993) or because they associate other race neighborhoods with poor neighborhood quality on dimensions such as schools, crime, and property values (Helper 1969, Ellen 2000, Bayer, Ferreira, and McMillian 2007, Krysan et al. 2008). However, living in different types of neighborhoods may also change individuals' perspectives. In integrated neighborhoods, regular, casual interaction may work to counteract dominant, negative stereotypes (Allport 1954, Oliver and Wong 2003). The result of both population sorting and/or neighbors' influence is that individuals who live in homogeneous

[109] African Americans, Latinos, and Asians live in neighborhoods that are comprised of 22%-46% of their own group.

neighborhoods are more likely to harbor negative stereotypes about other groups (Oliver 2010, Oliver and Wong 2003).

Yet, at higher levels of geography (e.g. in cities, counties, and metropolitan areas) it is integration or diversity that correlates with intolerance, prejudicial attitudes, increased racial tension, less cooperative behavior, and lower spending on public goods (Key 1949, Glaser 1994, Branton and Jones 2005, Taylor 1998, Campbell et al. 2006, Alesina et al. 1999, Vigdor 2004, Hopkins 2009, Poterba 1997). As a result, racial competition, racial resentment, and racial conservatism are positively correlated with homogeneity at the neighborhood level, but negatively correlated with homogeneity at the city level (see Oliver 2010 for a detailed account of these conflicting patterns).[110] A severely segregated city is one that is diverse overall and has many homogeneous neighborhoods – both characteristics which point towards a high degree of racial conflict.

This higher degree of racial conflict in segregated cities has obvious political implications. Levine (2014) has found that racial segregation is strongly predictive of partisan political divisions in metropolitan areas and that these political divides result in an unwillingness to cooperate on metropolitan-wide policy solutions. We can expect a similar pattern at the city level. First, in segregated cities, racial groups should be more divided with respect to political priorities. Second, diverse but divided cities may be less able to come to a consensus about the production of basic government services, and thus, will be less supportive of public goods provision. This second hypothesis speaks directly to the claim that diversity drives down

[110] There are a few exceptions to this pattern. A handful of scholars have *not* found that diversity increases tolerance at the neighborhood level. Gay (2006) and Oliver and Mendelberg (2000) find no relationship between neighborhood racial context and racial attitudes. Enos (2016) shows that that homogeneity decreases voter turnout among whites and also decreases support for conservative candidates. Cho, Gimpel and Dyck 2006 find that homogeneity decreases turnout among Asian Americans in some cases, but increases it (or has no effect) in others. Leighly and Vedlitz (1999) find that homogeneity correlates positively with turnout for whites.

collective investment (Alesina et al. 1999). As Benoy Jacob (2013) has persuasively argued, not all diversity is equivalent. When whites and nonwhites live in the same city, the pattern of residential integration ought to factor into expectations about public goods expenditures. White and nonwhites may live as next door neighbors, but they also may not. If segregation represents preferences or attitudes that are incompatible with collective investment, then uneven distribution of groups, not diversity per se, ought to correlate with lower public goods spending.

Segregation and Political Polarization

In municipal politics, vote patterns and policy priorities are shaped by racial cleavages more so than *any* other demographic division (Hajnal and Trounstine 2013a, Hajnal and Trounstine 2013b, Hajnal and Trounstine 2014). While ideology, partisanship, and class all play important roles in determining vote choice and support for municipal administrations, conflicts among racial groups are predominant. If segregated cities are more politically polarized, these racial divides should be most pronounced in places with a high degree of residential segregation. To determine whether or not this is the case, I analyze the relationship between residential segregation patterns and racial divisions in mayoral elections in the nation's largest cities between 1990 and 2010.

To estimate the effect of segregation on racial polarization, I use a dataset compiled by Hajnal and Trounstine (2014) that measures support for winning mayoral candidates across different racial groups in primary and general elections in large cities. The data include 91 separate contests from 25 cities. Vote by race data were compiled from a combination of exit polls, pre-election surveys, homogenous precinct analyses, and ecological inference.[111]

[111] These data are described completely in Hajnal and Trounstine (2014).

Summary statistics and a list of cities included in the analysis are provided in appendix Tables A6.1 and A6.2.

For each election, I calculated the difference in support for the winning candidate between black and white voters, Latino and white voters, and black and Latino voters. The dependent variable in this analysis is the absolute value of the largest difference in support for the winning candidate between any two racial groups. For instance, in Philadelphia in 2003, exit polls reported that 24% of white voters supported the winner, John Street, compared to 88% of black voters, and 47% of Latino voters. In this election the black-white divide was 0.64, the Latino-white divide was 0.23, and the black-Latino divide was 0.41. Therefore, the dependent variable takes the value of the black-white divide, 0.64. In 62 of the 91 contests, the largest divide was between black and white voters, in 13 contests it was the divide between Latino and white voters, and in 16 contests the largest divide was between black and Latino voters.[112] The distribution of racial divides across cases is listed in appendix Table A6.2.

As described in Chapter 1, my primary independent variable is a measure of segregation called Theil's *H* Index. The *H* Index measures the degree to which the diversity in each neighborhood differs from the diversity of the city as a whole, expressed as a fraction of the city's total diversity and weighted by the neighborhood's share of the total population.

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents the total population of neighborhood *n* or city *c* and E is the entropy of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city, and 1 where all neighborhoods contain only one group.

[112] As an alternate measure of division, I took the difference in support between white voters and the average of support among black and Latino voters. The results are extremely similar.

I calculated the *H* Index for all United States cities using Census-tract level demographic data from the 1980, 1990, and 2000 Censuses of Population and Housing and from the 2011 American Community Survey.[113] To start, I use four groups in the calculation of entropy: white (non-Hispanic), black (non-Hispanic), other (non-Hispanic), and Hispanic/Latino.[114] I then combine Blacks, Hispanics, and Other races into a single nonwhite group for comparison. For reference, the mean *H* Indices for each city in the analysis are shown in appendix Table A6.2.

I include a number of control variables in addition to the *H* Index. One of the primary arguments in the literature is that racially and ethnically diverse populations will have heterogeneous political preferences which then drives low spending on public goods. If this is the case, we should see more racial polarization in the vote as diversity rises. Thus, I include the proportion of *Blacks*, *Latinos*, and *Asian Americans* in the city and a measure of *Diversity* known as the Herfindahl Index[115]:

$$Diversity = 1 - \sum_{r=1}^{R} \pi_r^2$$

I also include control variables that are shown by Hajnal and Trounstine (2014) to affect racial polarization in voting and which may also be correlated with segregation. I account for the *Median Household Income*, proportion of the population *Renting* their homes, proportion of the population with a *College Degree*, the race of the candidates in the election (a dummy variable coded 1 if the election featured *Biracial* candidates), a measure noting whether or not the

[113] Tract-level data for 1980, 1990, and 2000 come from a proprietary product developed by GeoLytics called the Neighborhood Change Database (NCDB), which matches and normalizes Census tracts over time. The data from the 2011 American Community Survey (ACS) are available for download through the Census ftp server located at http://www2.census.gov/.

[114] The 1980 tract-level data only disaggregate the non-Hispanic population into Whites, Blacks, and Others, so I am unable to include Asians as a separate group.

[115] This calculation includes five racial groups: white (non-Hispanic), black (non-Hispanic), Asian (non-Hispanic), Hispanic, and other.

election was *Non-partisan*, an indicator for *Primary* elections, and the size of the total *Population* (logged). Finally, I include fixed effects for year and region and random effects for cities.

In Model 3, I also add a measure of the average *Ideology* among the city's white residents to determine whether or not segregation is merely a proxy for a conservative white population. This measure was constructed using General Social Survey (GSS) data from 1998, 2000, 2002, 2004, 2006, and 2008. Using restricted access data, I geo-coded each respondent in the GSS to his/her city of residence. I then took the mean ideology score for each city's white respondents for each year (higher values indicate more conservative respondents).[116] I interpolated ideology for odd years and then merged these data to the racial polarization data set. In order to preserve as many observations as possible, I matched GSS data from the most recent year for each election.

The results presented in Table 6.1 offer strong support for the hypothesis that more segregated cities are also more politically polarized.

[116] I dropped city/years from the GSS that only contained a single respondent.

Table 6.1: Racial Polarization in Segregated Cities

	Racial Divide w/ Multi-Group Segregation Index			Racial Divide w/ Two-Group Segregation Index			Racial Divide w/ Ideology control		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Multi-group H Index	0.932	0.39	0.02						
White/nonwhite H Index				0.756	0.30	0.01	0.835	0.30	0.01
Diversity	0.385	0.36	0.29	0.518	0.32	0.11	0.584	0.32	0.07
% Asian	-0.115	0.53	0.83	0.120	0.56	0.83	-0.004	0.52	0.99
% Black	-0.432	0.27	0.11	-0.237	0.22	0.27	-0.133	0.21	0.53
% Latino	-0.191	0.26	0.46	-0.059	0.25	0.82	0.095	0.28	0.73
Median HH Income (1000s)	-0.004	0.00	0.52	-0.007	0.00	0.32	-0.002	0.00	0.81
% Renters	-0.580	0.42	0.17	-0.806	0.43	0.06	-0.419	0.45	0.36
% College Educated	0.328	0.71	0.65	0.723	0.73	0.32	0.123	0.87	0.89
Biracial contest	0.210	0.04	0.00	0.208	0.04	0.00	0.192	0.04	0.00
Nonpartisan Election	-0.090	0.07	0.18	-0.089	0.07	0.18	-0.034	0.06	0.60
Primary Election	-0.092	0.03	0.00	-0.09	0.03	0.01	-0.071	0.03	0.02
Population (logged)	0.035	0.06	0.53	0.048	0.05	0.38	-0.011	0.06	0.86
White Ideology							-0.051	0.03	0.11
Constant	-0.242	0.57	0.67	-0.393	0.56	0.49	0.236	0.61	0.70
Wald χ^2	187.12		0.00	189.68		0.00	222.92		0.00
N	91			91			86		

Note: Multi-level mixed-effects linear regressions with fixed effects for region and year, and random effects for cities.

The relationship between segregation and political polarization is powerful. A city in the 10th percentile of the segregation distribution can be expected to have a 35 percentage point divide between different racial groups' support for the winning candidate, while a city in the 90th percentile of segregation has a predicted racial divide of 63 percentage points.[117] These results hold even with the inclusion of racial demographics. Segregation, not just diversity, matters for polarization. The data also indicate (comparing columns 1 and 2) that there is no significant difference in accounting for segregation among multiple racial groups as opposed to accounting

[117] Estimates were generated from the regression presented in column 1 with all other variables held at their mean values. Predicted effects were generated using the "margin" command in Stata 12.

for segregation of whites from nonwhites.[118] This makes sense given that whites are much more likely to live in homogenous neighborhoods than are other racial and ethnic groups and given that the most pronounced political division is typically between whites and one or more minority groups, rather than among minority groups. These results suggest that political polarization depends on the degree to which *white* residents live in exclusively white neighborhoods.

I have argued that segregation generates political divisions because the politics of space become intertwined with race. It is possible though, that segregation is simply correlated with a more ideologically conservative white population which then generates divides in support for candidates. As the third column reveals, the relationship between segregation and polarization appears to be unaffected by the conservatism of the white population. In fact, the relationship between ideology and polarization is such that cities with more conservative white populations have smaller racial divides, underscoring the conclusion that racial polarization is not driven by ideological divisions. In the next section, I ask whether or not this polarization extends beyond support for candidates to a lack of consensus over policy. In short, I find that it does.

Diversity and Segregation in the Aggregate

Scholars have provided evidence that racially diverse places and those that are becoming increasingly diverse spend fewer public dollars on productive public goods (Alesina et al. 1999, Hopkins 2009). I have argued that segregation, not just diversity, should matter in municipal politics. In the first section of this chapter, I showed that segregation is related to political polarization, even after accounting for racial demographics. If it is the case that segregated populations are less able to come to a consensus over citywide policy decisions, we should also

[118] The 95% confidence intervals for these coefficients are nearly completely overlapping. Additionally, adding both coefficients to the same equation and running a post-estimation Wald test of equality indicates no significant difference.

see less support for government spending in segregated cities after accounting for racial demographics.

In order to analyze this hypothesis, I draw on the Census of Governments city and township expenditure data from 1982, 1987, 1992, 1997, 2002, 2007, and 2012.[119] To these data, I merged interpolated data from the 1980, 1990, 2000, and 2010 Census of Population and Housing, and from the 2007-2011 American Community Survey (ACS). In the broadest sample, I have data for 3,113 cities, which range in size from about 750 residents to more than 8 million.[120] To capture overall spending on public goods, I analyze the effect of segregation on per-capita *Direct General Expenditures.*[121] I follow this with analyses of operations expenditures on specific budgetary categories including *Roads and Highways, Police, Parks, Sewers*, and a combined category of *Welfare, Health, and Housing and Community Development.*[122] I also analyze per capita *Revenues* coming from the city's own residents (as opposed to intergovernmental revenues) as an indication of the burden of funding the populous is willing to bear.[123] All spending data are in thousands of 2012 dollars. Summary statistics are shown in appendix Table A6.3. As above, the primary independent variable is the *H* Index to measure segregation. In the tables and figures below, I present results using the two-group (white and nonwhite) index; results from the multi-group index and isolation index are very similar.

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119 Available at http://www2.census.gov/pub/outgoing/govs/special60/. Filename is "_IndFin_1967-2012.zip".
120 Data are available for many more cities in 2012 than in prior years (largely because I have Census data for more places in 2011). I only use observations from 2012 that are also included in 2007 to create a consistent panel.
121 All analyses are restricted to cities with non-zero expenditures in the category in question because the data do not distinguish between zero expenditures and missing data.
122 Operations expenditure totals were generated by taking the total spending in each category less any capital expenditures in that particular year. The category of welfare, health, and housing/community development represents the primary expenditures by cities used to directly support people in economic need.
123 In contrast, the categorical expenditure variables include all spending on a certain target regardless of the source of the funds.

To account for the alternative explanation that diversity drives down spending, the analyses include the proportion of the population that is *Black*, *Asian*, and *Latino* as well as a measure of overall *Diversity*. Controlling for demographics also helps account for the fact that white and minority preferences for government spending differ. Racial and ethnic minorities support more government spending than whites on a large number of programs at all levels of government (Hutchings and Valentino 2004). In the aggregate then, we might expect cities with larger populations of racial and ethnic minorities to support more per capita expenditure, just as Boustan et al. (2013) find. But if my theory is right, cities with more segregation and similar shares of minority residents ought to witness smaller budgets and lower spending on public goods compared to cities with less segregation because the likelihood of cooperation ought to be fundamentally different in these types of places.

The analyses below also control for the total *Population* (logged), the proportion of the population *Over Age 65*, the proportion of the population with a *College Degree*, the proportion of each 100 residents *Employed as Local Government* workers, the proportion of households that *Rent* their home, and the *Median Household Income*. These controls are meant to capture demographic dimensions that affect both segregation and expenditures (through both preferences and need). For instance, we might expect cities with large populations of government workers to have higher levels of spending, while the reverse might be the case in cities with older populations. An important alternative explanation for a negative relationship between segregation and spending could be city wealth. Segregated cities might be poorer cities for some reason, and may simply have fewer resources to spend on public goods. Controlling for the proportion of the city that rents and the median household income are intended to account for

this possibility.[124] Finally, I include fixed effects for cities. This allows me to analyze the effect of segregation within the same location over time and controls for the many factors (such as age of the city, differentials in costs for service provision, taxation powers and limits, etc.) that might lead cities to differ in expenditure patterns cross-sectionally. I cluster standard errors by city. I exclude from the analyses cities with only a single Census tract because the measure of evenness is constant (by definition).

I begin, in Table 6.2, by regressing per capita *Direct General Expenditure* on *Segregation* with the controls described above. Then, in the second column, I replace *Diversity* with *5 Year Changes* in racial group shares (following Hopkins 2009) to determine whether or not changes in diversity could be the driving factor.[125] In the third column, I add the mean *Ideology* of city residents (calculated from the GSS for all city residents as described above) to account for the possibility that segregated cities are more ideologically conservative. In alternate models (not shown), I add a control for renter segregation. The coefficient is insignificant and does not affect the results presented below.

[124] In alternative analyses I tested the inclusion of proportion of the city in poverty and median home values with no change to the pattern of results.
[125] Hopkins (2009) uses 10 year changes in racial group shares. I chose 5 years in order to preserve more observations in the time-series. The results are similar with 10 year changes.

Table 6.2: Effect of Segregation on Overall Per Capita City Expenditures

	Direct General Expenditure Per Capita			Direct General Exp w/ changing demographics			Direct General Exp w/ ideology control		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Segregation	-1.266	0.218	0.000	-1.141	0.231	0.000	-1.731	0.45	0.000
Diversity	0.199	0.133	0.134				0.060	0.257	0.816
% Black	0.726	0.179	0.000	0.854	0.168	0.000	0.117	0.641	0.856
% Asian	-0.88	0.288	0.002	-1.212	0.307	0.000	-0.565	0.74	0.445
% Latino	1.634	0.171	0.000	1.721	0.19	0.000	1.560	0.394	0.000
5 yr Δ % Black				-1.918	0.691	0.006			
5 yr Δ % Latino				-1.695	0.725	0.02			
5 yr Δ % Asian				-1.389	1.073	0.196			
Median Income (1000s)	0.006	0.001	0.000	0.005	0.002	0.001	0.009	0.003	0.001
% Local Gov. Employees	-0.004	0.015	0.787	-0.007	0.017	0.683	-0.077	0.051	0.132
% Renters	0.387	0.318	0.223	0.181	0.311	0.560	-0.123	0.693	0.860
% Over 65	0.458	0.597	0.443	0.639	0.453	0.158	-1.139	0.887	0.200
% College Grad	5.114	0.434	0.000	5.806	0.433	0.000	6.66	1.23	0.000
Population (logged)	-0.36	0.045	0.000	-0.439	0.07	0.000	-0.551	0.097	0.000
City ideology							-0.001	0.037	0.972
Constant	3.379	0.441	0.000	4.268	0.675	0.000	6.358	1.317	0.000
N	16,831			14,284			2,524		
Number of Cities	3,113			3,113			395		

Note: Linear regressions with fixed effects for cities, robust standard errors clustered by city presented.

Table 6.2 provides strong evidence that segregation and public goods spending are negatively related, even in the presence of changing demographics, diverse populations, and conservative residents. The effects of segregation are substantively meaningful and statistically significant. Increasing the segregation index from the 25th to 75th percentile (from .01 to .10) in the base model lowers per capita direct general expenditure from $1,413 to $1,299. A difference in total spending of more than $100 per resident could dramatically affect the quality of public goods that individuals experience given that the average per capita operating expenditure on police is about $190 and about $51 on parks. In Table 6.3, I show that the depressive effect of segregation extends to individual categories of public goods spending as well.

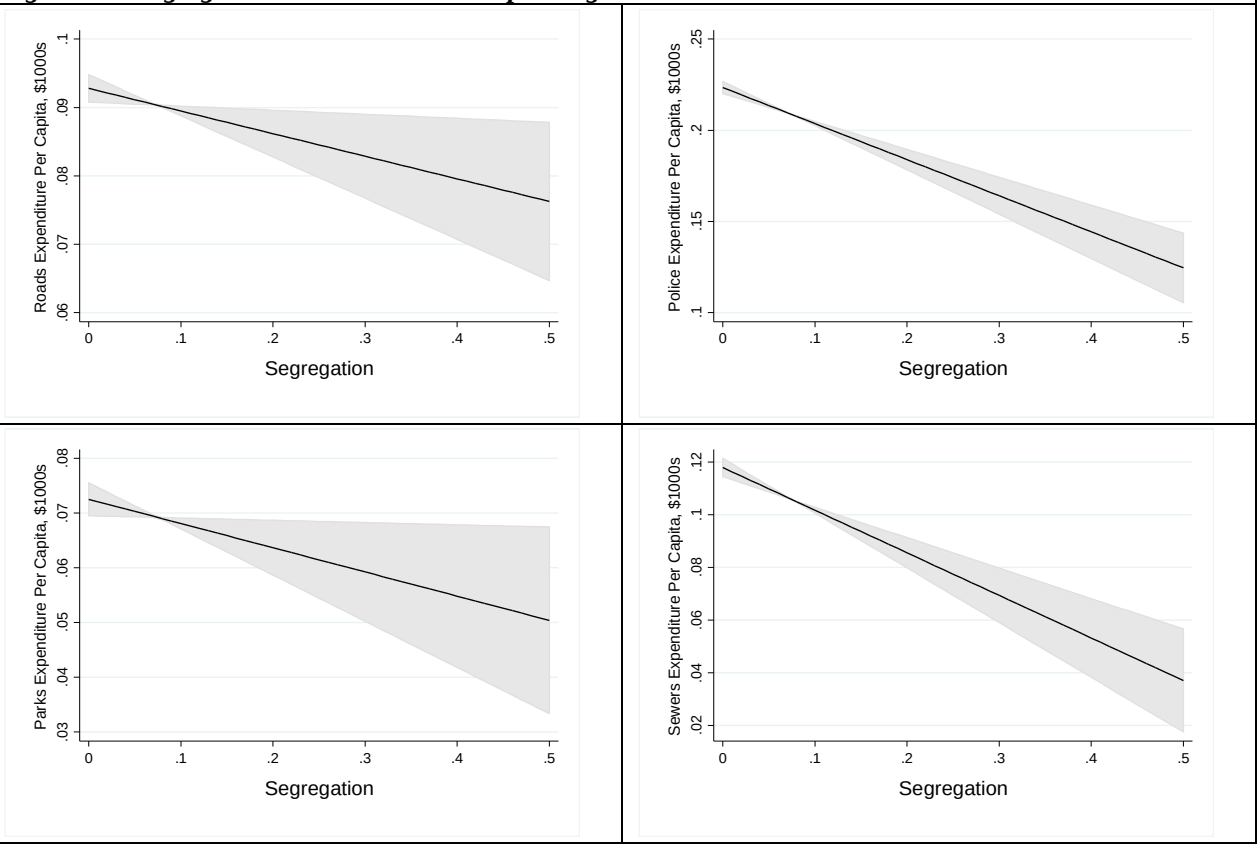
Table 6.3: Effect of Segregation on Public Goods

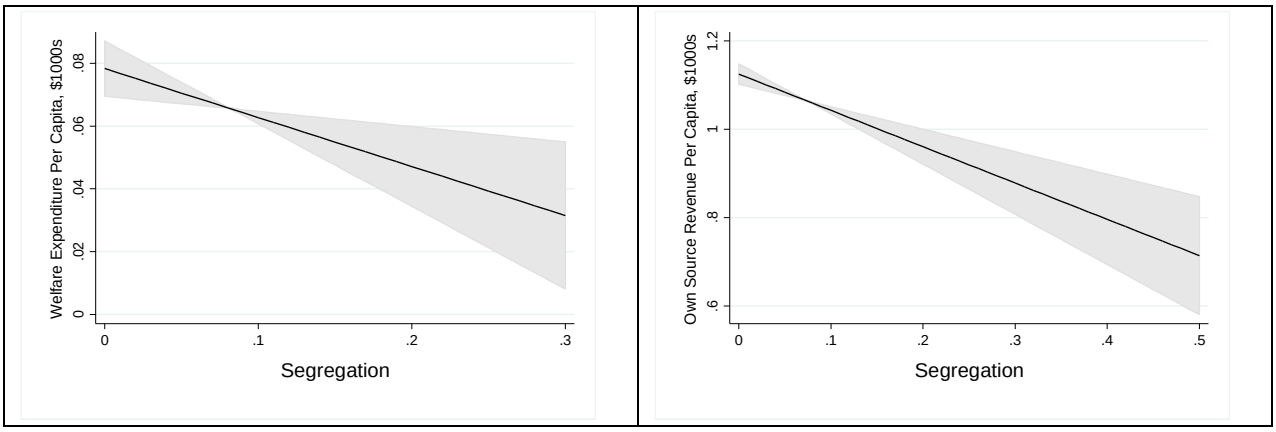
	Roads			Law Enforcement			Parks			Sewers			Housing/Welfare			Own Source Rev		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	B	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t||
Segregation	-0.033	0.01	0.02	-0.198	0.02	0.00	-0.044	0.02	0.03	-0.162	0.02	0.00	-0.156	0.05	0.00	-0.822	0.16	0.00
Diversity	0.017	0.01	0.06	0.060	0.01	0.00	0.012	0.01	0.25	0.041	0.01	0.00	-0.023	0.02	0.35	0.136	0.09	0.13
% Black	0.039	0.01	0.00	0.167	0.02	0.00	0.024	0.02	0.13	0.005	0.02	0.78	-0.013	0.07	0.86	0.321	0.13	0.01
% Asian	-0.069	0.02	0.00	-0.083	0.03	0.02	-0.069	0.03	0.01	-0.155	0.04	0.00	0.084	0.07	0.26	-0.508	0.23	0.02
% Latino	0.018	0.01	0.12	0.361	0.02	0.00	0.031	0.01	0.01	0.088	0.02	0.00	0.144	0.03	0.00	1.303	0.12	0.00
Median Income (1000s)	0.000	0.00	0.00	0.000	0.00	0.11	0.000	0.00	0.01	0.000	0.00	0.00	0.00	0.00	0.57	0.006	0.00	0.00
% Local Gov. Employees	0.000	0.00	0.81	-0.001	0.00	0.52	0.001	0.00	0.38	-0.002	0.00	0.28	-0.009	0.00	0.01	-0.006	0.01	0.64
% Renters	0.030	0.02	0.11	0.085	0.03	0.00	0.026	0.02	0.22	0.188	0.03	0.00	0.075	0.05	0.11	0.501	0.26	0.05
% Over 65	0.149	0.03	0.00	0.191	0.05	0.00	0.174	0.04	0.00	0.076	0.06	0.17	-0.081	0.08	0.29	0.648	0.47	0.17
% College Grad	0.189	0.02	0.00	0.842	0.04	0.00	0.399	0.04	0.00	0.382	0.04	0.00	0.447	0.09	0.00	4.452	0.37	0.00
Population (logged)	-0.020	0.00	0.00	-0.06	0.00	0.00	-0.006	0.00	0.02	-0.027	0.00	0.00	-0.024	0.01	0.00	-0.229	0.03	0.00
Constant	0.197	0.03	0.00	0.548	0.05	0.00	0.006	0.03	0.85	0.215	0.04	0.00	0.262	0.09	0.00	1.894	0.33	0.00
N	16,642			16,673			15,809			13,832			13,203			16,830		
Number of Cities	3,089			3,083			3,020			2,840			2,754			3,113		

Note: Linear regressions with fixed effects for cities, robust standard errors clustered by city presented.

Clearly, spending on public goods is lower in cities with greater segregation. Across all six categories displayed in Table 6.3, segregation exerts a significant negative effect. Figure 6.1 presents these results graphically.

Figure 6.1: Segregation and Public Goods Spending





Note: Figures show the predicted relationship between Theil's H segregation index and per capita spending on public goods in constant 2012 dollars. Gray shading represents 95% confidence intervals.

Tables 6.2 and 6.3 also reveal that while segregation is negatively related to public goods investment, more diverse communities are mostly associated with higher levels of spending as the positive coefficients on diversity and on percent black and Latino indicate. Given that racial and ethnic minorities are both more supportive of public goods spending and more likely to live in segregated places (which see less support for public goods), it is important to ask what the overall impact of these countervailing effects is. Table 6.4 shows how segregation affects public goods provision across the range of values of diversity. I divide the sample of cities into quintiles of percent nonwhite (with 3,366 city-years in each quintile) and then, after estimating the model displayed in column 1 of Table 6.2, I predict Direct General Expenditure per capita at the minimum and maximum values of segregation for each quintile, holding all other variables at their mean values given the quintile. Table 6.4 shows the difference in these predicted values for each quintile of percent nonwhite.

Table 6.4: Change in Direct General Expenditure Per Capita by % Nonwhite at Minimum and Maximum Levels of Segregation

Quintile of % Nonwhite	Average % Nonwhite	Average Segregation Level	Change in Predicted Direct General Expenditure Per Capita*	95% Confidence Interval
1	4%	0.030	-$490	(-$656, -$325)
2	10%	0.041	-$870	(-$1163, -$576)
3	19%	0.066	-$970	(-$1298, -$643)
4	33%	0.108	-$930	(-$1244, -$616)
5	65%	0.125	-$846	(-$1132, -$561)

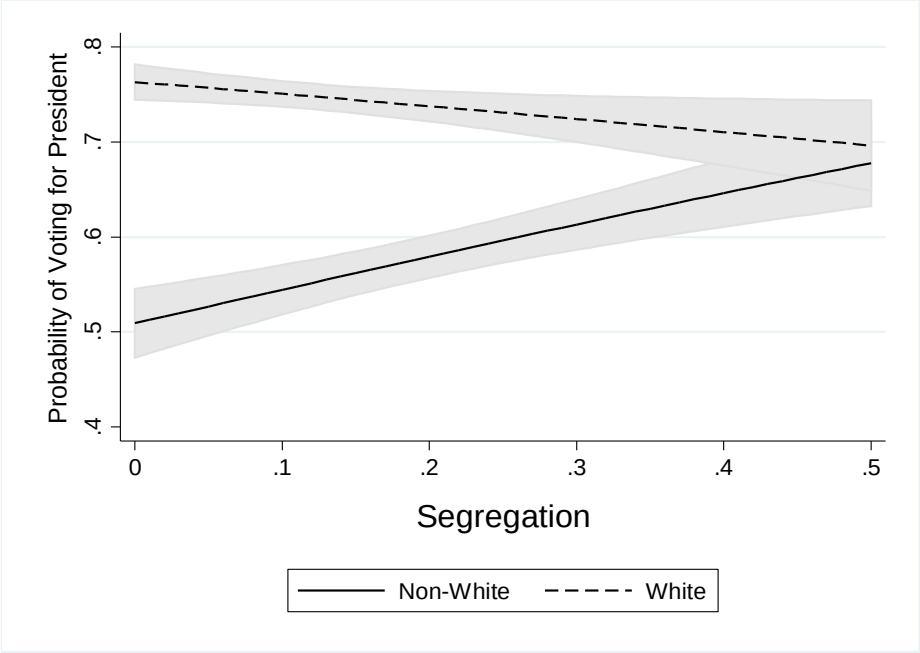
*Predicted values generated from regression displayed in column 1, Table 7.2. Change is from the minimum to maximum level of segregation within a quintile of percent nonwhite.

Table 6.4 reveals substantial declines in direct general expenditure as segregation increases, regardless of the size of the minority population. Segregation has the largest effect in cities with moderately sized minority populations (where minorities comprise 19-33% of the population), but even in majority-minority cities (where minorities make up more than 50% of the population) and cities that are overwhelmingly white, increasing segregation decreases investment in public spending. The fact that segregation has the most pronounced effect in the middle quintiles offers indirect evidence that it is white residents responding to significant minority concentrations driving the negative relationship between segregation and public goods spending. An alternative possibility is that low turnout among minority residents drives this pattern. As Figure 6.2 shows, this case is extremely unlikely, given that turnout among minority residents is actually higher in more segregated cities while turnout among whites is lower.

To test this possibility, I draw on data from the General Social Surveys conducted between 1998 and 2008; years for which I was able to determine respondents' city of residence

(see Chapter 7 for additional details on this dataset). I estimate the probability that a respondent *Voted* in the most recent presidential election. Using logistic regression, I regress this variable on the level of *Segregation* in the respondent's city. To understand how segregation operates differently for different groups, I interact the level of segregation with a dummy variable coded 1 if the respondent is *White and Non-Hispanic*, and 0 otherwise. I control for the respondent's level of *Education*, whether or not they have *Kids at home*, their *Gender*, whether or not they are *Married*, their *Income*, and whether or not they are a *Government Employee*.

Figure 6.2: Correlation between Segregation and Turnout by Race



At low levels of segregation, white turnout is much higher than minority turnout, but the lines converge as segregation increases. Furthermore, using the racial polarization dataset described in the first section of this chapter, I find that turnout and segregation are positively

correlated in the aggregate. These patterns strongly suggest that politics is more contentious in more segregated communities. Thus, a lack of participation by residents who support high spending is not likely to be the cause of lower public goods investment.

However, even with controls, one might still worry about the causal relationship between segregation and spending. I have argued that segregation should suppress public goods spending. However, it is entirely possible, perhaps quite likely, that some unmeasured set of factors affect both spending and segregation (or that the reverse is true, and spending levels affect segregation patterns). Since we cannot randomly assign segregation to determine its effect on city spending, I use an instrumental variable approach to study the relationships.

A great many factors affect residential location and the distribution of different types of residents across neighborhoods. One set of factors that affects both property values and the ability for communities to maintain a preferred degree of homogeneity are natural and manmade barriers. For instance, freeways and railroad tracks frequently divide more desirable and less desirable parts of town (Ananat 2011). But railways and freeways are often built with the intent to segregate racial communities (Bayor 1996). Instead, I focus on waterways (including large streams and rivers), which vary in number across cities and are arguably exogenous to segregation and spending given that they are not man-made. The use of waterways as an instrumental variable was introduced by Hoxby (2000) who used streams to estimate the governmental fragmentation of metropolitan areas. Cutler and Glaeser (1997) rely on Hoxby's waterways data as an instrument for metropolitan area racial segregation. My instrument differs in two ways. First, and most importantly, my data capture waterway counts and segregation patterns at the *city* level rather than at the metropolitan-area level. Secondly, I use a different source file for the waterways data and a different method for determining whether a waterway

ought to be counted within the boundaries of a community.[126] In order to use waterways as an instrument for segregation, I gathered the "rivers and streams" geographic information system map file from the National Hydrologic Remote Sensing Center which is part of the National Oceanic and Atmospheric Administration (an agency in the US Department of Commerce).[127] I added Census TIGER Line boundary files for all places in the United States as of 2000.[128] I then generated counts of waterways for each place and added these counts to the finance data described previously. Overall, the correlation between the number of waterways and the H Index is a powerful 0.37, and the F-statistic on the excluded instrument is 3,999, which is considerably higher than the typical target of 10.[129]

The current analyses use the same dependent variables as were presented in Tables 6.2 and 6.3 (per capita spending on various public goods). The number of waterways is used as an instrument for the *H* Index. Waterways are also correlated with other characteristics that are important to both segregation and spending patterns. The most important of these characteristics is the size of the population which is correlated with both the number of waterways and the level of segregation. People have settled near waterways since antiquity, and larger cities are also much more likely to be segregated than smaller cities (perhaps because there are more neighborhoods from which to choose). To account for this, I include logged population

[126] Hoxby (2000) uses a hand count of streams that are 3.5 miles in length and "of a certain width" supplemented with data from the Geographic Names Information System which lists the latitude and longitude of smaller streams. Instead, I use geographic information system maps as described in the main text and include all large streams and rivers regardless of length and width. Hoxby (2000) attributes a stream to a Metropolitan Statistical Area (MSA) if it terminates in the MSA (Rothstein 2007), whereas my analysis attributes a waterway to a community if it flows through the community at all (not just at its origin or destination).

[127] The "rivers and streams" shape file is available at: http://www.nohrsc.noaa.gov/gisdatasets/. It was most recently updated in 2008.

[128] Boundary files are available for download by state here: http://www2.census.gov/geo/tiger/TIGER2010/PLACE/2000/

[129] This F-statistic is drawn from a simple two-stage regression instrumenting segregation with waterways and including no additional controls.

as an instrument in the first stage.[130] In both the first and second stage regressions, I include the same control variables as presented in Table 6.2, with two changes. Because the number of waterways is constant in my dataset, I do not add fixed effects at the city level.[131] Instead, I include fixed effects for region and year. Secondly, I add a lagged version of the dependent variable to account for the high correlation between observations over time for the same city and the fact that local budgets are typically changed incrementally from prior years. The results from this instrumental variable approach are displayed in Table 6.5. For presentation purposes, the first stage results are relegated to appendix Table A6.4.

[130] In alternative specifications, I use the number of waterways per capita as the instrument. The pattern of the results is exactly the same.
[131] The omission of fixed effects allows for the inclusion of all cities regardless of the number of Census tracts.

Table 6.5: Effect of Segregation on City Expenditures, Instrumental Approach												
	Direct General Exp			Roads			Law Enforcement			Parks		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Segregation instrumented	-3.806	1.09	0.00	-0.385	0.05	0.00	-0.353	0.10	0.00	-0.025	0.02	0.18
Lagged DV	0.858	0.00	0.00	0.490	0.00	0.00	0.966	0.00	0.00	0.822	0.00	0.00
Diversity	-0.418	0.38	0.27	-0.027	0.02	0.15	-0.001	0.04	0.97	0.004	0.01	0.57
% Black	0.798	0.36	0.03	0.080	0.02	0.00	0.080	0.03	0.02	0.000	0.01	0.98
% Asian	-0.848	0.99	0.39	-0.088	0.05	0.07	-0.082	0.09	0.38	-0.029	0.02	0.08
% Latino	1.121	0.31	0.00	0.086	0.02	0.00	0.078	0.03	0.01	0.007	0.01	0.18
Median Income (1000s)	0.012	0.00	0.00	0.001	0.00	0.00	0.001	0.00	0.00	0.000	0.00	0.00
% Local Gov. Employees	0.276	0.03	0.00	0.017	0.00	0.00	0.020	0.00	0.00	0.002	0.00	0.00
% Renters	2.627	0.39	0.00	0.159	0.02	0.00	0.159	0.04	0.00	0.033	0.01	0.00
% Over 65	2.260	0.81	0.01	0.270	0.04	0.00	0.233	0.08	0.00	0.089	0.01	0.00
% College Grad	-0.495	0.62	0.42	-0.013	0.03	0.68	-0.051	0.06	0.39	0.045	0.01	0.00
Constant	-2.034	0.31	0.00	-0.105	0.02	0.00	-0.149	0.03	0.00	-0.026	0.01	0.00
N	2,669			25,121			25,034			23,197		
	Sewers			Welfare			Own Source Revenue					
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|			
Segregation instrumented	-0.393	0.06	0.00	-0.194	0.06	0.00	-3.344	0.95	0.00			
Lagged DV	0.082	0.01	0.00	0.936	0.00	0.00	0.712	0.00	0.00			
Diversity	0.075	0.02	0.00	0.000	0.02	1.00	-0.373	0.33	0.26			
% Black	0.054	0.02	0.02	0.065	0.02	0.01	0.686	0.31	0.03			
% Asian	-0.229	0.06	0.00	-0.008	0.05	0.87	-0.909	0.86	0.29			
% Latino	-0.048	0.02	0.01	0.045	0.02	0.01	1.01	0.27	0.00			
Median Income (1000s)	0.000	0.00	0.89	0.000	0.00	0.57	0.013	0.00	0.00			
% Local Gov. Employees	0.000	0.00	0.88	0.007	0.00	0.00	0.294	0.03	0.00			
% Renters	0.082	0.02	0.00	0.090	0.02	0.00	2.573	0.34	0.00			
% Over 65	0.344	0.05	0.00	0.109	0.05	0.03	2.435	0.71	0.00			
% College Grad	0.057	0.04	0.11	0.009	0.04	0.81	-0.433	0.54	0.42			
Constant	0.007	0.02	0.69	-0.057	0.02	0.00	-2.025	0.27	0.00			
N	20,258			17,827			25,671					

Note: Two stage least squares regressions with fixed effects for regions and year (not shown); Instrumented: Two-group H Index of segregation; Excluded Instruments: # of Waterways, Population logged.

Regardless of the statistical approach used, segregation appears to have a powerful, depressive effect on public goods provision in cities. The pattern of results in Table 6.5 reflects the OLS regression findings presented in Table 6.2. After accounting for demographic differences, cities with more segregation tend to have smaller budgets, they tend to extract fewer resources from their residents, and spend less on roads, policing, parks, sewers, and support for the poor.

But perhaps lower spending is what residents prefer. After all, many elections have been won on platforms promising austerity and frugality. In the final section of this chapter, I explore what the consequences of low spending might be by analyzing a universally disliked event: sewer overflows.

Segregation and Sewer Overflows

The federal Environmental Protection Agency (EPA) monitors municipal sewer systems for overflow events. According to a 2004 EPA report to Congress, approximately 860 billion gallons of untreated wastewater were released into communities between 2001 and 2003 when sewer systems' capacities were exceeded. Any single overflow might occur for many reasons – excessive wet weather, pipe blockages, equipment failure, or insufficient capacity. However, generally, as Tessin (2009) explains:

> The performance of a sewer system is strongly related to capital fund-raising….Without adequate investment, excessive groundwater can enter sewers through cracked pipes and ingrown tree roots. Aging pipes can break and send sewage to the surface. Growing populations can cause wastewater flow to exceed the system's design capacity….For these reasons, local governments that do not invest enough capital typically experience more sewer overflows and other system failures…(p168).

Some federal and state grants are available for sewer system maintenance, but the vast majority of funding to reduce overflows comes from local sources (EPA 2004). According to

my data, the most segregated cities spend about $200 less per capita each year on their sewer systems. In the aggregate, this translates to an average of about $60,000 less per year spent on sewers (after controlling for all of the other demographic variables included in the regressions above). When city engineers plan, build, extend, and repair sewer systems, they take into account variables like population growth and average precipitation, as well as potential deviations from those estimates.

Analyses of effective or responsive governmental policy typically needs to take into account variation in constituent preferences. For instance, a community that spends very little on protection of open space or on recycling may be accurately representing the views of its residents. Sewer overflows are different. No one wants a river of fecal matter running down their street or flooding their basement. Thus, it seems reasonable to assume that more frequent overflows are, without qualification, worse than fewer overflows. That said, voters and sewer engineers may not agree on the level of resources needed to prevent overflows and therefore, raising funds for capital improvements may be challenging. If it is the case, as I have asserted above, that more segregated cities will have more trouble coming to political consensus about public goods provision, then we ought to expect more segregated cities to witness more sewer overflows – all else equal. In order to determine whether or not this is the case, I utilize data collected by the Environmental Protection Agency in 2004.

In this data collection, the EPA gathered information on overflows from 25 state environmental agencies between 2001 and 2003.[132] In total, the EPA reported about 35,000 different overflow events from several thousand sewer agencies. The EPA data do not include any geographic identifiers other than the name of the sewer agency, and so, I matched these

[132] The data were generously provided to me by Jeff Tessin who had secured the data from an EPA staff member for his PhD dissertation.

names to cities by hand. After dropping cases in which the sewer operator was not a municipal government (e.g. metropolitan water districts or county governments), and cases in which the EPA data provided insufficient detail to identify the municipality, I determined the location of 19,817 overflow events. I aggregated these events to the city level and was able to match these data to segregation measures and Census data for 1,417 cities.

The median number of overflows during this period was 2, while the mode was 1. A few cities with enormously high numbers of overflow events pull the mean to 50. For this reason, I take the natural log of the number of overflow events for each city and standardize it by the city's population. This *Logged Overflows Per 1000 Persons* measure serves as my dependent variable. My main independent variable is the city's *H* Index of racial segregation measured in 2000 if available and 2010 if not. I control for the natural log of the *Total Population* to account for the possibility that cities serving more people are likely to have more advanced engineering for their sewer systems by necessity. I add fixed effects for states for two reasons. The first is that the EPA data collection gathered statistics form state agencies which may have had different reporting standards. The second reason is to account for the different environmental, regulatory, and funding environments cities in different states face. In a second regression, I add controls for other city demographics. I add the share that *Rents* their homes to account for the possibility that homeowners may be more likely to act politically to prevent overflows. I include the share of the population that is *Urban* to capture the difficulties rural areas may face in providing sewer systems to a dispersed population. I include the share of the population that is *Black*, *Asian*, and *Latino* to determine whether or not diversity alone can account for poor performance. I add the city's *Median Household Income* and *Per Capita Subventions* to measure the city's capacity to

raise funds for sewer maintenance and expansion. The results of these OLS regressions with robust standard errors are shown in Table 6.6 (summary statistics are in appendix Table A6.5).

Table 6.6: Correlation Between Segregation and Sewer Overflows

	β	SE	P>|t|	β	SE	P>|t|
Segregation	2.166	0.53	0.00	2.398	0.78	0.00
Population (logged)	-0.347	0.05	0.00	-0.325	0.07	0.00
% Renters				-0.424	0.40	0.29
% Urban				-0.129	0.09	0.16
% Black				-0.524	0.37	0.16
% Asian				3.813	1.01	0.00
% Latino				-0.080	0.28	0.77
Median Income (1000s)				-0.001	0.00	0.66
Subventions Per Capita (1000s)				-0.031	0.01	0.00
Constant	3.678	0.53	0.00	3.554	0.59	0.00
N	1,417			1,417		
R^2	0.199			0.207		

Note: Linear regressions with fixed effects for states, robust standard errors presented.

The data reveal a significant correlation between segregation and sewer overflows. Living in a city with very little segregation, one can expect about 1.5 overflows per year on average. This increases to nearly 2.5 overflows in cities at the 95th percentile of the segregation distribution. Not only do segregated cities see lower spending on public goods, but they also witness worse performance as well.

Conclusion

The evidence presented here indicates that racial segregation plays a significant role in access to public goods. Segregated cities are comprised of homogeneous neighborhoods embedded in larger diverse communities. While African Americans, Latinos, and Asians are today, fairly likely to live as neighbors, whites remain in isolated enclaves. Because local governmental decisions often concern spatial allocation, neighborhoods are important municipal

actors in local politics. In more segregated places, neighborhood interests become overlaid with racial division. Segregated cities are more racially polarized in elections and may be less likely to generate policy consensus. The result is that cities with more segregation have smaller public goods budgets. Segregated cities raise fewer dollars from their residents and spend less money on roads, law enforcement, parks, sewers, welfare, housing, and community development. This low spending may have significant consequences. For example, segregated cities also see more sewer overflows.

Patterns of residential location reveal that white residents are more likely than people of color to live in cities with low levels of segregation. In my dataset, nearly 74% of nonwhite residents live in cities in the top quintile of the segregation distribution, compared to only 48% of whites. What this means is that compared to whites, nonwhites are much more likely to live in communities that struggle to generate adequate public goods for their residents. Not only are whites segregated from racial and ethnic minorities within cities, but they are also segregated from people of color across city lines. This fact means that access to public goods is segregated along racial lines as well. As the nation has become more diverse, it has also become more unequal. Segregation and public goods play important roles in linking these phenomena.

Chapter 7: The Local Roots of Modern Conservatism

Between the late 1940s and mid-1960s, fights over racial integration pervaded the politics of America's cities. Throughout the United States, residents battled over the integration of public schools, public transportation, pools, parks, golf courses, and of course – neighborhoods. In detailed case studies, historians have shown that white resistance to desegregation in urban centers across the country, gave rise to a new rhetoric that emphasized the protection of private property and homeowners' rights (Kruse 2005, Lassiter 2006, Self 2003, Sugrue 1996). These historical studies argue that the rise of conservatism and Republican allegiance associated with suburban America today was actually rooted in the conflictual racial politics of central cities. In this chapter, I provide evidence that these patterns were widespread. I show that battles over the control of public space and public goods in postwar urban America contributed to the transformation of the demographic landscape and affected public opinion. People who would come to live in segregated neighborhoods, either by choice, compulsion, or happenstance, developed political attitudes and loyalties that differed significantly from similarly situated residents in more integrated places.

First, I show that federal school desegregation orders generated increases in the number of segregated neighborhoods in metropolitan areas. In this analysis, I take advantage of the randomness desegregation order timing to substantiate the link. Then, I provide evidence that the relative whiteness of a neighborhood in 1970 is a powerful predictor of political attitudes and loyalties today. People who live in places that were whiter than their metropolitan area in 1970 were more likely to vote for the Republican presidential candidate in 2008 and are more conservative than their individual attributes (e.g. race, gender, marital status, age, education, income, presence of children) would otherwise predict. Conversely, those who live in places that

were more diverse in 1970 are more liberal today. However, even with a set of individual-level controls, it is difficult to convincingly estimate the effect of neighborhoods on public opinion. Some unmeasured characteristic might cause certain neighborhoods to be more or less diverse than the larger metropolitan area in 1970, and for individuals who live there to be more or less liberal. Given existing evidence that racial attitudes became a more important predictor of vote choice and public opinion during this same period (Carmines and Stimson 1989), it is important ensure that these relationships are being driven by the attributes of neighborhoods and not omitted individual-level variables. To do this, I instrument for the relative whiteness of neighborhoods using two geographic features: land elevation (controlling for waterfront areas) and distance from the nearest big city.

The consequences of segregation on individuals' life chances are well known; and as Thomas Sugrue (2015) writes, "the effects…are devastating."[133] Segregation increases inequality on many different socio-economic dimensions (Cutler and Glaeser 1997, Ananat 2011). The results presented here indicate that segregation also has powerful political consequences - increasing divisions in both public opinion and voting behavior.

Entanglements of Ideology and Integration

At the onset of the Second World War, the United States was already a very segregated nation. All large cities had clearly defined neighborhoods inhabited by people of color and others inhabited by whites – a pattern generated by both private choices and public policies (Massey and Denton 1988). [134] As a result of the economic collapse during the Great Depression

133 https://www.washingtonpost.com/opinions/its-not-dixies-fault/2015/07/17/7bf77a2e-2bd6-11e5-bd33-395c05608059_story.html

134 However, on the whole, the United States, both rural and urban, was still overwhelmingly white in 1940. About 10% of the population was black, about 1.7% of the population could be considered Hispanic/Latino, and about

and then material scarcity during the war, the nation faced a severe housing shortage during the 1940s. When increasing numbers of blacks moved from rural areas into cities and from the South to the North and West, the boundaries of existing black neighborhoods were pushed to their limits. In the Southwest, the Latino population also swelled with wartime employment.[135] These pressures resulted in explosive social and policy conflicts along racial lines. Because city governments had the power to zone, to permit development and locate nuisances, and thus to determine the value of property, these fights were central to city politics. As Self (2003) argues, "the effects of property [valuation] are far-reaching…They structure all kinds of interactions - from where one can buy a home to where politics is organized, from how police interact with neighborhoods to where children go to school. The struggle for the postwar city was over no less than the power to control and organize space…" (p18).

In response to postwar demographic changes, white homeowners sought to protect their neighborhoods (which they considered to be the reward for their hard work and frugality) from disruption and disorder. In the minds of many, pursuit of these goals required racial exclusivity. Sugrue (1996) reports that in Detroit, as elsewhere, "a majority of whites looked to increased segregation as the solution to [the] 'colored problem'" (p215). Whites, particularly those who owned their homes, believed that they had a right to certain neighborhoods and the public benefits (e.g. schools, safety) associated with those spaces. They understood minority demands for integration and court ordered desegregation plans as undermining this entitlement (Kruse 2005, p126). Whites justified exclusion with fiscal arguments; claiming that, "since Negroes are

0.1% Asian. http://www.latinamericanstudies.org/immigration/Hispanics-US-1850-1990.pdf; https://www.census.gov/population/www/documentation/twps0076/twps0076.pdf

[135] http://www-bcf.usc.edu/~philipje/Segregation/Haynes_Reports/Contours_PRR_2001-04e.pdf. Hundreds of thousands of Mexican descendants were deported during the Great Depression, so the overall Latino share of the population changed little.

so poor and pay virtually no taxes, they are actually not entitled to get more public services than the whites care to give them…" (Myrdal 1944, p336). When blacks *did* receive benefits, it was believed that whites unfairly bore the financial burden of their support. To illustrate this point, Kruse (2005) quotes a segregationist poem that made rounds in Atlanta in 1957:

> Po' white folks must labor, 'tween sun and sun,
> To pay welfare taxes whilst we has de fun,
> We doan pay no taxes, we doan make no goods,
> We just raise little niggers, way back in the woods.... (p127).

Above all else, whites feared that integration would jeopardize their single largest investment – the value of their home (Helper 1969), as well as the quality of their neighborhood (Kruse 2005). The tight coupling between property values, public goods, and racial exclusivity was inexorably tied to the racism embedded in the real estate market (Hayward 2013) and the poor public goods that cities had provided to neighborhoods of color in decades past (Myrdal 1944, Torres-Rouff 2013). Kruse (2005) explains that, "by the time white homeowners confronted racial transition at their neighborhood's borders, the American real-estate industry had completely embraced the idea that such racial transition would, without doubt, lead to a devastating decline in property values" (p60). Public policies like redlining and expulsive zoning[136] and private actions like racial steering and white flight would make this relationship true over the long run.[137]

[136] Expulsive zoning is the practice of siting industrial, semi-industrial, or other nuisances in neighborhoods of color in order to both preserve white neighborhoods and induce black movement into particular parts of the city.
[137] In the short run, blacks paid much higher prices than whites for comparable housing (Cutler and Glaser 1997). This fact was what made it so lucrative for individual whites to abandon neighborhood protection and move to the suburbs. In Atlanta, Kruse (2005) analyzes the property values in a neighborhood that transitioned from white to black between 1950 and 1960, and finds that the property values rose 27 percent over this decade.

Although many whites agreed on the desirability of residential segregation,[138] they were stymied by various hurdles. The Supreme Court had ruled racial zoning (the designation of certain neighborhoods as being inhabitable only by whites) unconstitutional in 1917, so a perfectly direct policy approach to residential segregation was not an option.[139] Instead, the preservation of white communities required collective action to prevent individual homeowners from selling or leasing to minority residents. As minority populations expanded and white homeownership rates skyrocketed, hundreds of white homeowners' organizations arose in the 1940s, 50s, and 60s (Sugrue 1996, Kruse 2005).[140] Such organizations were often created by real estate developers to protect the value of their investment. This was a charge taken seriously by property owners. These (typically all white) "civic associations, productive associations, improvement associations, and homeowners' associations" (Sugrue 1996, p211) fought the building of public housing in their neighborhoods, sought representation on planning boards, and battled open housing laws (Self 2003).[141] Importantly, they relied on racial restrictions in housing deeds (and racism in the real estate market) to maintain neighborhood exclusivity. But the Supreme Court ruled restrictive covenants unenforceable in 1948 (*Shelley v. Kraemer*), and an open housing movement swept the nation. Then, in the 1950s, other tools of segregation came under fire as the court struck down separate-but-equal accommodations in a series of cases.[142]

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[138] In 1964 only 27% of white Americans supported general integration (Schuman et al 1985).
[139] Many white neighborhoods also utilized violence to defend their borders (Meyer 2000, Hirsch 1983). Although tolerated (even encouraged) by the police and political establishment of some cities, murders and arson were technically illegal as well.
[140] In some cases, the link between segregationists and homeowners' groups was direct. For example, the head of Atlanta's West End Cooperative Corporation had gotten his start in community organizing as the head of Klavern No 297's Housing Kommittee (Kruse 2005 p54).
[141] They also served as social organizations welcoming new neighbors and organizing block parties (Sugrue 1996).
[142] e.g. *Muir v. Louisville Park* 1953, *Brown v. Board of Education* 1954 & 1955, *Holmes v. Atlanta* 1955, *Dawson v. Baltimore* 1955, *Rice v. Sioux City Memorial Park Cemetery* 1955, *Browder v. Gayle* 1956, *Burton v. Wilmington* 1961, *Johnson v. Virginia* 1963, *Simkins v. Cone Memorial Hospital* 1963, *Watson v. City of Memphis* 1963.

By this time, nearly all cities utilized zoning in some fashion and many invoked the power of eminent domain to shape development through, for example, the permitting of multi-family housing, the razing of slums, and the placement of highways, public housing, and industry. In the past, white homeowners had successfully used these tools to configure residential demography (Nightingale 2006) – but they became even more important in the face of new court decisions and the rising Civil Rights Movement.[143] At the same time, racial violence continued to erupt. However, local elites were committed to maintaining peace in their cities (Ogorzalek 2017). So, in order to convince city governments to defend their turf, white neighborhoods needed to change their approach.

In city after city, white middle class, homeowners turned away from claims based on racial exclusivity and began to press their demands in terms of rights; a tactic Sugrue (1996) terms "defensive localism" (p210). White residents fought for the, "'right' to select their neighbors…the 'right' to do as they pleased with their private property…and the 'right' to remain free from what they saw as dangerous encroachments by the federal government," (Kruse 2005, p9). Local governments responded with neighborhood protection by pursuing "racial stability through spatial apartheid" (Lassiter 2006, p52). In the South, these arguments were the moderate path – a response to violent white supremacy on the right and integrationists on the left (Lassiter 2006, Kruse 2005). The fact that rights-based language gained ground in all regions of the United States meant that it offered a powerful basis for the rise of a national movement.

[143] Throughout this period, neighborhood organizations also sought to maintain the color line using private mechanisms as well. For instance, some organizations raised funds to repurchase homes sold to black families in order to sell them back to whites. They also pressured real estate agencies and lenders to refuse to sell to black buyers. Additionally, they set fire to homes on the black market and newly purchased homes by black owners (Kruse 2005, Sugrue 1996). The problem with such tactics is that they were always susceptible to a sort of prisoner's dilemma. It was incredibly lucrative for a single white homeowner to sell her home to a black family and this idea made individual white owners skittish about neighborhood transition. Neighborhood organizations constantly urged owners to think of the common good rather than their bottom line, but frequently failed.

The discourse had several facets. Subscribers claimed support for racial integration in theory (so as to distinguish themselves from the ugliness of Jim Crow), but angrily opposed government intervention in racial uplift or equalization (Lassiter 2006, p137). In fact, integration was typically viewed in zero-sum terms – gains for blacks equated to losses for whites. Government attempts to produce equal outcomes were understood to be an elevation of minority rights above those of the majority (Sugrue 1996, p227), a form of "reverse discrimination" (Lassiter 2006, p123). Policy solutions to redress inequality were cast as the work of an insidious, "'liberal elite' made up of judges, intellectuals, and government bureaucrats" (Hall 2005, p5).

Further drawing on racialized beliefs about the distribution of tax burdens, neighborhood defenders argued that they should not have to pay for public benefits or welfare for those who did not contribute to the public pool. So when people of color demanded, and then the court ordered, desegregation of public spaces and residential communities, these views culminated in all out tax-revolts among white residents. In cities like Atlanta, whites urged the city government to eviscerate the public budget, eliminate bus lines, as well as close pools and public parks (Kruse 2005). Whites voted down bonds for civic improvements, abandoned public schools, and railed against an activist government. In the end, many of these residents would leave the city altogether – packing up their belongings and their newly appropriated ideology and moving to the suburbs (Nall 2015, Boustan 2010).

Yet, suburban growth largely happened for market reasons that were unrelated (or at least, only tangentially related) to racial conflict in cities (Jackson 1985). As Chapter 1 revealed, by 1970, a plurality of the population lived in suburbs and more than 60% of Americans owned their homes. As the pace of suburbanization and homeownership picked up, arguments

surrounding neighborhood defense lost explicit racial designations of who contributed and who did not and who had a right to high property values and good services and who did not. As Self (2003) explains, the move away from making overt racial claims was, "intended to inoculate segregation and white privilege against charges of racism" (p268). This new language offered a "color-blind" approach to the maintenance of neighborhood boundaries. This rhetoric perpetuated the myth that residential segregation was a matter of economics and individual choice. White homeowners came to see segregation as the consequence of "meritocratic individualism" – not fostered by public policy or law (Lassiter 2006, p1). Those who lived in segregated minority neighborhoods could thus be blamed for their condition, making them undeserving of social assistance.

Maintaining exclusively white neighborhoods in the central city was possible with the help of cooperative city governments. But it was much easier in the suburbs, where a combination of public policies and private actions made homeownership only available to white residents (Jackson 1985, Hayward 2013). By 1970, neighborhoods (both within central cities and outside of them) that had maintained their whiteness despite the massive demographic shifts over the preceding 30 years had developed a distinctive, conservative approach to politics throughout the nation. Homeowners in these places expected low taxes, they rationalized racial segregation and inequality as the product of meritocracy, and they conflated white exclusivity with high property values (Self 2003, Lassiter 2006). They couched their demands in terms of protection of individual property rights. In so doing, they drew on a long tradition of American conservative principles emphasizing economic individualism, limited government, and equality of opportunity, but not outcomes (Feldman 1988, McClosky and Zaller 1984, Kinder 1998).

Nearly forty years later, these neighborhoods continued to foster distinctive politics. Whether or not new arrivals to defended neighborhoods had been involved in the earlier battles, they came to, "accept the politics born out of white flight all the same. They embraced a new middle class rhetoric of rights and responsibilities" (Kruse 2005, p245). The Republican Party came to embrace the neighborhood defenders. Starting in the 1960s and throughout the 1970s, Republicans positioned themselves as the party that would help whites to resist social change and impose order in their environments (Hetherington and Weiler 2009, Carmines and Stimson 1989). These ideals held sway in defended neighborhoods and residents dutifully sorted themselves into the Republican Party.

The arguments appropriated in support of neighborhood defense in the 1950s and 60s are still visible in politics today. In the 2012 presidential election, Republican nominee Mitt Romney proclaimed:

> There are 47 percent of the people who will vote for [the Democratic incumbent] no matter what…who are dependent upon government, who believe that they are victims, who believe the government has a responsibility to care for them, who believe that they are entitled to health care, to food, to housing, to you-name-it. That that's an entitlement. And the government should give it to them….These are people who pay no income tax…My job is not to worry about those people. I'll never convince them they should take personal responsibility and care for their lives (Corn 2013).[144]

Like the homeowners' organizations of the mid-century, Romney's statement invoked a class (not race)-centered view of deservingness. Forty-seven percent of the American public, Romney implies, "doan pay no taxes," and rely on government benefits for subsistence. Romney's claim

[144] More boldly, 2016 Republican nominee Donald Trump's first wife explained, "I have nothing against Mexicans, but they [come] here — like this 19-year-old, she's pregnant, she crossed over a wall ….She gives the birth in American hospital, which is for free. The child becomes American automatically. She brings the whole family, she doesn't pay the taxes, she doesn't have a job, she gets the housing, she gets the food stamps. Who's paying? You and me." http://nypost.com/2016/04/03/ivana-trump-opens-up-about-how-she-advises-donald-his-hands/

that these non-contributors do not take personal responsibility for their lives recalls the meritocratic arguments white homeowners made in the past about their success and their neighborhoods. It is unsurprising then, that defended neighborhoods have offered disproportionate support to Republican candidates and conservative policies in recent years.

The Effect of Context

To say that neighborhoods condition political views and actions is not novel. A great deal of research investigates contextual effects on public opinion and political behavior. A significant portion of this literature focuses (as I do here) on the community's racial composition.[145] Some scholars find that diversity produces tolerance (e.g. racial contact theory; Allport 1954, Oliver 2010, Sigelman et al. 1996). Others find the reverse - that large minority populations are related to racial intolerance and lack of support for spending on race-focused or race-coded policies (e.g. racial threat theory; Key 1949, Gay 2006, Huckfeldt 1986, Orey 2001, Taylor 1998, Bobo and Hutchings 1996, Blalock 1967, Alesina and Glaeser 2004, Tolbert and Hero 1996, Plotnick and Winters 1985, Enos 2016, Baybeck 2006). Scholars also find a negative relationship between diversity and support for taxation, spending, and public goods provision more generally (Alesina et al. 1999; Glaser 2002; Alesina and Spolaore 1997; Easterly and Levine 1997; Poterba 1997; Habyarimana et al. 2007, 2009; Putnam 2007; Cutler et al. 1993; Goldin and Katz 1999, Hopkins 2009, Vigdor 2004). My argument draws on both of these frames to argue that rights-oriented conservatism was fueled in an environment of racial threat (integration in the 1940s, 50s, and 60s), but became entrenched in an environment of racial isolation (whiteness of the neighborhood in the 1970s). Today, white conservatism at the

[145] Other work on context analyzes social networks (Eulau and Rothenberg 1986, Zuckerman 2005), partisan contexts (Ceaser 2013 and DiSalvo 2006) and economic contexts (Gay 2006, Books and Prysby 1999, Oliver 1999, Oliver and Mendelberg 2000)

individual level is associated with homogeneity *not* diversity in neighborhoods. The whiteness of a neighborhood could produce individual-level conservatism through two different mechanisms: the nonrandom migration of individuals into or out of whiter neighborhoods (i.e. sorting/selection), or by directly affecting the ideology of residents (i.e. treatment). The sorting mechanism is supported by research demonstrating the existence of white flight (Boustan 2010, Nall 2015) and work that offers evidence of residential choice based on differing preferences for integration and other community features (Mummolo and Nall 2016, Cho, Gimpel and Hui 2013, Bishop and Cushing 2008, Card, Mas, and Rothstein 2008, Charles 2006). A treatment effect is consistent with work showing that particular types of places generate distinctive preferences as a result of features like population density or community size (Rodden 2011, Gainsborough 2001, Ogorzalek 2017, Oliver 2001).

Treatment is also consistent with work revealing differences across places that magnify the individual attributes of inhabitants – such as when minority neighborhoods lack elite networks (Wilson 1987, Widestrom 2015). A treatment effect is further predicted by scholarship that finds that neighborhood homogeneity breeds racial hostility and intolerance due to a lack of exposure to or contact with neighbors of different backgrounds (Oliver and Mendelberg 2000, Oliver and Wong 2003). Finally, a treatment effect is indicated by scholarship demonstrating what Acharya, Blackwell, and Sen (2016) refer to as the "historical persistence of political attitudes" (p2). Patterns of race relations developed during early periods of American history generated opinions and behaviors among whites in particular places that were transmitted over time and remain detectable in modern politics (see also Hersh and Nall 2016). My argument is similar: battles over integration that occurred mid-century imbued defended neighborhoods with distinctive political attitudes that are communicated through processes like neighborhood social

interaction (Huckfeldt and Sprague 1995) and/or "low-intensity cues" - the casual observation of ones' neighbors (Cho and Rudolph 2008).

Very likely, both selection and treatment processes are at work here. Some residents of defended white neighborhoods brought their conservatism with them; others adopted it after arriving. Today, defended neighborhoods are also likely to continue to attract movers with conservative preferences. Without detailed panel survey data, I cannot discern which is the more powerful factor. What I am able to demonstrate is that neighborhood traits from the 1970s predict conservatism at aggregate and individual levels above and beyond the mobility of the population and the demographic makeup of the neighborhood today.

Conservatism and Race

Just as it is not novel to propose that neighborhoods affect political behavior, it is also not novel to propose that modern conservatism and Republican voting are rooted in racial conflict (see Hutchings and Valentino 2004 for a thorough review). Indeed, it is uncontroversial to state that the Civil Rights movement was a catalyst for partisan realignment, as Southern Democrats abandoned the party championing the rights of Black Americans (Frymer 1999, Carmine and Stimson 1989, Miller and Shanks 1996).

Since the 1970s, scholars have argued that white public opinion shifted mid-century, from a willingness to endorse Jim Crow style race prejudice/biological racism to subtler/symbolic expressions of racial resentment (see for example, Sears and Kinder 1971, Kinder and Sears 1981, McConahay 1982, Sears 1988, Kinder and Sanders 1996, Sears et al. 1997, Bobo 1983, Bobo, Kluegel, and Smith 1997, Schuman et al. 1997).

Additionally, a sophisticated literature on public opinion and political behavior reveals that racial attitudes are strongly predictive of views toward redistributive spending (Bobo and Kluegel 1997, Sears 1988, Kinder and Sanders 1996, Rabinowitz et al. 2009, Federico 2005, Gilens 1999, Quadagno 1994, Luttmer 2001) and government policies that have become racially coded (Winter 2006, Valentino, Hutchings, and White 2002, Mendelberg 2001, Hurwitz and Peffley 1997). If an individual holds negative stereotypes of racial minorities, he or she is likely to oppose expenditures on functions like welfare, and even all government spending in some settings (Sears and Citrin 1982).

What I add to these debates is not a link between racial politics, public opinion, ideology, and party identification, but a new perspective on location. The marriage between rights-based conservatism and white perspectives on race was amplified in the crucible of *city* politics throughout the postwar period not just at the state and national levels. And neighborhood defense appears to have played a causal role in the development of a host of conservative political opinions that appear to be "nonracial" (Hutchings and Valentino 2004, p6).

Empirical Evidence

I've argued that local battles over integration of public spaces in the postwar period led some whites to pursue exclusively white neighborhoods. To generate government support for segregation, neighborhood defenders turned to a set of conservative arguments that highlighted their meritocratic success. Because the Republican Party protected defenders' rights to choose their neighbors, it won their allegiance. If my argument is correct, we should find 1) that integration pressures are related to a higher incidence of exclusively white neighborhoods and 2) that residents of homogeneous white neighborhoods are more conservative and more Republican.

Testing these claims requires that I measure the presence of exclusively white neighborhoods (as the dependent variable in the first hypothesis, and as the independent variable in the second). To do this, I constructed a dataset using a proprietary product developed by GeoLytics called the Neighborhood Change Database (NCDB). The NCDB matches and normalizes census tracts between 1970 and 2000, allowing for a direct comparison of neighborhoods over time. To this, I add census tract data from the 2011 American Community Survey, matched to 2000 boundaries. I refer to neighborhoods that have a greater share of white residents than the metropolitan area as a whole as white defended neighborhoods; conversely, neighborhoods that have a greater share of residents of color than the metro area are called minority dominated neighborhoods. I use this relative conception because many residents are constrained to a particular metropolitan area by preferences or needs (Mummolo and Nall 2016), but the choice of neighborhood within that metro area may be more flexible. I capture this dynamic by measuring the demographic makeup of neighborhoods *compared to* the demographic makeup of their larger metropolitan area. This variable is the *Tract-Metro Difference in Percent White Residents.*[146] Neighborhoods that are whiter than the metro area as a whole have a positive value and those that have more people of color take on a negative value. In 1970, the average neighborhood was only very slightly whiter than the metro area (Mean= 0.018), but the distribution has a long left tail, indicating many neighborhoods that were overwhelmingly populated by people of color; by 2011, the distribution was more normally distributed, with a mean just slightly less than zero. This difference in distributions reflects the diversification of the nation and the well-documented finding that neighborhood level segregation between whites

[146] The census did not tabulate whites separately from Hispanics in 1970, but did in 1980, 1990, 2000, and 2011. Where possible I use non-Hispanic whites

and people of color has declined substantially since the 1970s (Vigdor and Glaeser 2012, Frey 2014).

In order to determine the effect that pressures for integration had on neighborhood demographics, I take advantage of a dataset compiled by Nathaniel Baum-Snow and Byron Lutz (2011) that records the timing of federal court orders for desegregation of public schools in central cities.[147] Although *Brown v Board of Education of Topeka* determined the unconstitutionality of segregated schools, a specific court order was nearly always required for large, central city districts to pursue desegregation plans. The data include court orders implemented between 1960 and 1990 for 92 central school districts in metropolitan statistical areas. Of these 92 orders, 48 are in the South, 9 are in the Northeast, 20 are in the Midwest, and 15 are in the West.

My examination does not include metropolitan areas that never faced a desegregation order. The factors that led some metro areas to receive court-ordered school desegregation plans and others not to receive such plans are most certainly not random, and are likely related to the outcome of interest here (the presence of white defended and minority dominated neighborhoods). Inclusion of the districts with no court order would thus be likely to violate the identifying assumption on the desegregation parameter. However, for those central cities in metropolitan areas that *did* receive an order, the timing of that order is plausibly exogenous to unobserved time-varying factors *within* metropolitan areas that might affect segregation due to the vagaries of the judicial process. The precise date at which court orders took effect was

[147] The data are described completely in the statistical appendix to Baum-Snow and Lutz (2011)'s paper. The appendix is available at: https://www.aeaweb.org/aer/data/dec2011/20080918_app.pdf

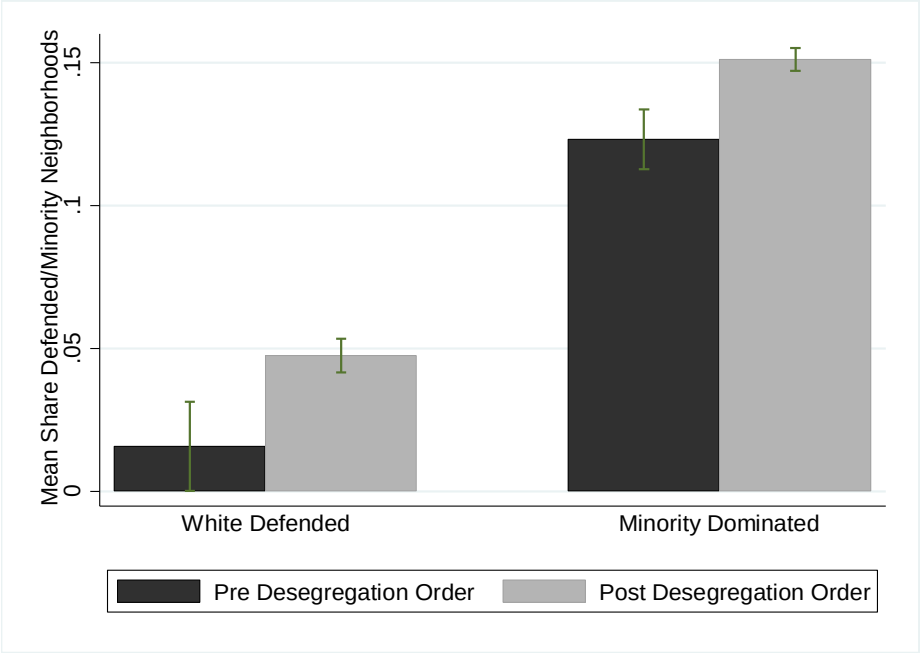
related to differences in the length of the appeals process for otherwise similar metropolitan areas (Baum-Snow and Lutz 2011).

Including Metropolitan Statistical Area (MSA) fixed effects ensures that the analysis compares the presence of defended/minority neighborhoods before and after the implementation of the court order in each metro area, while accounting for variation across MSAs. For each metropolitan area, in each of four census years (1970, 1980, 1990, and 2000), I calculated the mean *Tract-Metro Difference in Percent White* and the standard deviation of this measure. I then generated a count of census tracts that were either greater than or less than one standard deviation away from the mean racial difference for each census year in each MSA. These counts form the numerator for the share of all neighborhoods that are *White Defended* or *Minority Dominated*. These shares serve as dependent variables in my analyses. The key independent variable in my analysis, *Desegregation Order*, is a dummy indicator coded from the Baum-Snow and Lutz (2011) data noting whether or not a desegregation order was in place in the MSA's central city for a given census year. The analysis compares the number of defended/minority neighborhoods before and after the implementation of desegregation by the federal government in each MSA.[148] As controls, I add the log of the *Total Population* in the MSA, the share of MSA households *Renting* their homes, the *Wealthy* share of households (households with incomes above the 90th percentile), and the population *Density* of the MSA. While it is unlikely that these factors are related to desegregation order timing, directly, it is possible that they reflect an underlying time trend that influenced implementation as well as the propensity for

[148] Of the 92 metro areas in the dataset, 64 had orders implemented between 1970 and 1990. Because tract-level data was not available for most areas in 1960, I am unable to estimate change for 28 metro areas. These MSAs are still included in the regressions – just with no change on the desegregation order variable.

segregation. Figure 7.1 displays the marginal effects of desegregation orders, holding the control variables at their mean values.

Figure 7.1: Federal Desegregation Orders Increase Residential Segregation



The figure shows that desegregation orders significantly increased the share of neighborhoods that were both white defended and minority dominated. On average, desegregation orders generated about 30 new homogeneous neighborhoods in metropolitan areas. Homogeneity was achieved when **whites** moved within cities to new neighborhoods and to the suburbs.[149] Approximately two-thirds of the exclusive white neighborhoods in this dataset

[149] Baum-Snow and Lutz (2011) provide evidence that Black families responded to desegregation orders by moving into newly integrated central school districts suggesting that changes in homogeneity of neighborhoods would have been driven by white not black movers.

are located in suburban places and about three-fourths of the homogeneous neighborhoods of color are located in central cities.

Did these homogeneous neighborhoods produce identifiably different politics? In short, yes. To provide evidence of this claim, I measure the homogeneity of neighborhoods continuously for a single year - 1970. I use 1970 because this year marked the height of residential segregation in America and the end of the post-war period of massive demographic change (Cutler, Glaeser, and Vigdor 1999). First, I analyze the effect of neighborhood homogeneity on the aggregate 2008 presidential vote. Then, I turn to individual-level data. I find that homogeneity in 1970 predicts conservatism today.

My first dependent variable is the 2008 *Democratic Share* of the two-party presidential vote aggregated to the census tract level for the 49 states that collect vote data by precinct.[150] Precinct-level vote returns are available from the Harvard Elections Database Archive.[151] Using ArcGIS, I combined the precinct vote data with 2000 census tract boundaries available from the National Historic Geographic Information System archive.[152] I aggregated precinct-level votes to the census tract level.

My independent variable is the *Tract-Metro Difference in Percent White, 1970*. This measure captures the difference between the tract-level share of residents who were white and the metro area-level share of residents who were white in 1970. I control for the 2000 tract-level *Percent White*, the share of the tract that *Rents* their home, and the share of the tract's households

150 Oregon conducts all elections by mail, so geographically allocated votes are not available.
151 A combined, projected polygon shapefile was very generously provided to me by Clayton Nall.
152 Because precinct boundaries sometimes cross-tract boundaries, I calculated the land-area share of each precinct falling within each census tract. I used this geographic share as a weight on the total votes for the Democratic and Republican candidates before aggregating precinct vote totals to the tract level.

that are *Wealthy* (incomes above the 90th percentile). These variables account for the possibility that whiter tracts in 1970 are simply populated by more whites and homeowners today, and so, are more conservative only as a result of their current demographics. I also add the *Density* of the census tract (total population divided by total area) to account for Rodden's (2011) argument that the source of modern liberalism is housing density. To investigate the role of selection, I add a measure of the share of the tract's residents who lived in the same house in 1995. In a third analysis, I add fixed effects for region. In all analyses, I use ordinary least squares regression and cluster errors by MSA. Table 7.1 presents the results of these regressions. Summary statistics are shown in appendix Table A7.1.

Table 7.1: Effect of 1970 Relative Whiteness on 2008 Democratic Vote Share

	Column 1			Column 2			Column 3		
	B	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	-0.422	0.016	0.000	-0.112	0.023	0.000	-0.080	0.019	0.000
% White 2000				-0.340	0.026	0.000	-0.408	0.021	0.000
% Renters 2000				0.244	0.024	0.000	0.184	0.025	0.000
% Wealthy 2000				0.116	0.036	0.001	0.121	0.040	0.003
% Same House 1995				0.183	0.044	0.000	0.043	0.042	0.306
Density				1.356	1.164	0.245	-0.143	0.725	0.843
Midwest							0.020	0.013	0.115
South							-0.108	0.018	0.000
West							-0.073	0.020	0.000
Constant	0.631	0.013	0.000	0.628	0.044	0.000	0.816	0.040	0.000
R^2	0.207			0.584			0.643		
N	44,958			44,958			44,958		

Note: OLS regression, robust standard errors clustered by MSA presented.

A neighborhood of color in 1970 (*tract-metro difference* = -0.5), delivered about 84% of its votes to Barack Obama in 2008. A neighborhood that was white defended in 1970 (*tract-metro difference* = 0.5) offered Obama only 42% of its votes in 2008.[153] Obviously,

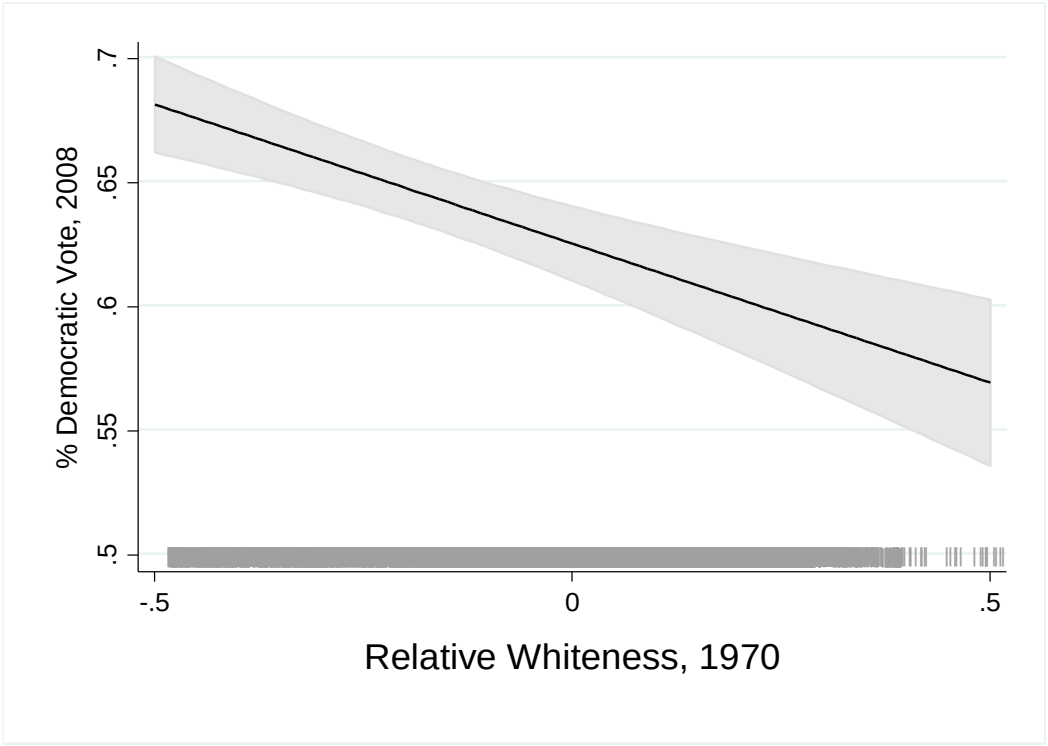
[153] Estimates generated following the regression presented in Column 1, using the margins command in Stata 14.

demographic patterns are persistent – one explanation for this outcome is that these neighborhoods that were white defended and minority dominated in 1970 are still populated with whites and people of color today. But as Column 2 shows, even accounting for contemporary demographics, neighborhoods that were relatively whiter in 1970 were about 11 percentage points less likely to support Obama relative to McCain. The difference between the least white and most white neighborhoods in 1970 is 22 percentage points – even controlling for whiteness in 2000.

Contrary to a pure selection story, census tracts with more stable populations were more (not less) likely to support Obama and there is no interaction effect between stability of the population in 1995 and the whiteness of the neighborhood in 1970. That is, if selection were entirely driving these results, we would expect that tracts that were both white in 1970 and had a large share of movers would be most likely to support the Republican candidate. This is not what we see. Holding all other variables at their mean values, Figure 7.2 presents the results from Column 2 graphically for the densest portion of the distribution on the independent variable.[154]

[154] This portion of the distribution reflects the concepts of white defended and minority dominated neighborhoods. The mean value of the 1970 tract-metro difference in percent white for minority dominated neighborhoods was -0.5 and 0.25 for defended neighborhoods.

Figure 7.2: Effect of 1970 Neighborhood Characteristics on 2008 Presidential Election Votes, Controlling for Demographics in 2000



The third column of Table 7.1 reveals that the relationship holds even when accounting for differences in mean levels of Democratic support across regions. Despite the robustness of the effect of 1970 demographics on 2008 presidential votes, it is possible that some set of uncontrolled factors affect the relative whiteness of neighborhoods in 1970 and Republican support in 2008. In an effort to determine a causal neighborhood effect, I instrument for relative whiteness in 1970 with topographical features measured at the census tract level - relative elevation of the census tract (accounting for waterfront neighborhoods) and the tract's distance from the nearest large city.

Starting perhaps with Burgess's concentric zone model of urban social structure (1925), scholars have noted that metropolitan areas often develop such that the most desirable residential neighborhoods are those that are as far as possible from the central business district, but still within commutable distance. From early on, distance from the center denoted privilege; and the historical record indicates that movement to outer lying areas was more available to whites than people of color for many decades (Jackson 1985).[155]

To measure distance from the nearest central city, I used 2010 place boundaries available from the National Historic Geographic Information System. Using data from the 2011 American Community Survey, I determined the largest population center in each metropolitan area. I converted these central cities and 2000 census tracts to centroids in ArcGIS. I measured the Euclidean distance between the closest central city and each census tract (using a near table with only one match). To generate a normal distribution, I took the natural log of this distance. The resulting measure, *Distance to Center City* (logged), is my instrumental variable.

To be useful, an instrumental variable must predict the primary independent variable, but not directly affect the dependent variable. As explained above, there is good reason to believe that a neighborhood's distance from the nearest central city positively affects the share of residents who are white in that community. There is no reason to believe that neighborhoods that are far from the city center will house Republican supporters *aside* from their demographic characteristics. However, race is not the only relevant demographic trait. Living outside of the city center also requires residents to be able to afford housing and commuting costs and

[155] That said, at no point in American history has it been the case that black central cities have been ringed by heavily populated white suburbs. This is because when suburbs WERE all white (in the 1920s), they were not heavily populated and central cities were majority white as well. By the time some central cities became majority minority, suburbs had also become more integrated. This fact is further evidence that the correct measure of residential racial context is the racial makeup of the neighborhood as compared to the metropolitan area as a whole.

obviously, race is correlated with socio-economic status. I account for this by adding the share of households in the tract that *Rents* their homes, and the share of households that are *Wealthy* as of 1970 in the first stage of the instrumental analysis.

As in the regressions presented in Table 7.1, my instrumental analysis controls for the share of the population that is white in 2000, the share of the tract that lived in the same house in 1995, and the tract's population density. My dependent variable is again the tract-level aggregate measure of the two-party *Democratic Vote Share* in 2008. I use a two stage least squares regression, with errors clustered by MSA. Table 7.2 presents the results of this estimation.

Table 7.2: Effect of 1970 Relative Whiteness on 2008 Democratic Vote Share, Instrumental Variable Analysis			
	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	-0.226	0.091	0.013
% White 2000	-0.341	0.042	0.000
% Same House 1995	-0.051	0.027	0.062
Density	5.627	1.862	0.003
Constant	0.856	0.031	0.000
FIRST STAGE			
% White 2000	0.290	0.021	0.000
% Same House 1995	-0.272	0.032	0.000
Density	5.548	0.960	0.000
Distance to City Center (logged)	0.015	0.004	0.000
% Renters 1970	-0.141	0.040	0.000
% Wealthy 1970	0.248	0.033	0.000
Constant	-0.195	0.048	0.000
R^2 (second stage)	0.544		
N	44,970		

Note: Two Stage Least Squares Regression, robust standard errors clustered by MSA presented F Test of Excluded Instruments = 50.55

The results of the instrumental variable analysis offer strong additional support for my argument that the defended/minority status of a neighborhood in 1970 continues to exert a powerful, independent, causal effect on partisanship in modern elections. The political identity of neighborhoods appears persistent. In the next section, I provide individual-level evidence of the conservatism of defended neighborhoods.

Individual Level Conservatism

Obtaining individual-level survey data that is representative of city populations is notoriously difficult (Tausanovitch and Warshaw 2014). The costs of sampling across many localities, in addition to the complexity of designing specific surveys for each community, are typically prohibitive for scholars. Instead, I take advantage of the long time series and consistent battery of questions asked by the General Social Survey (GSS). The GSS administers a survey

to an average of 2,000 respondents representing adults living in non-institutional arrangements in the United States on a biennial basis. I create a new dataset built from restricted access GSS data from the 1998, 2000, 2002, 2004, 2006, and 2008 surveys.[156] To the GSS data set, I merge tract and MSA level census data from 1970. To measure contemporary neighborhood demographics, I add linearly interpolated data from the 1990 and 2000 Census of Population and Housing and the 2007-2011 American Community Survey. For tracts not included in the American Community Survey, I use 2000 census data for all years of the GSS. The combined dataset includes tract-level data for 12,188 respondents from 117 metropolitan areas with an average of about 100 respondents per metro area.[157] Although the GSS asks an enormous range of questions each year, only a subset of the survey questions is repeated. This repetition is crucial for my ability to estimate neighborhood effects because I rely on pooling across years to gain a large enough sample size. As a result, I restrict my analyses to questions that include at least 5,000 usable responses. At this threshold, the analyses include an average of 50 responses from each MSA. For the most part, my analyses only include white respondents, as this is the relevant population for my theory.[158] I begin by determining the demographic characteristics of individuals who live in neighborhoods that were defended/segregated in 1970. In this analysis, my dependent variable is the 1970 *Tract-Metro Difference in Percent White* described above. My independent variables include several demographic traits that are known to correlate with vote choice and ideology (Miller and Shanks 1996, Carmines and Stimson 1986, Green, Palmquist and Schickler 2002): the respondent's race (a dummy variable coded 1 for *White, non-*

[156] These are the years for which the GSS was able to provide census tract level information for every respondent, which is essential to my analysis. The tract-level information was provided in response to a sensitive data request submitted to the National Opinion Research Center at the University of Chicago.
[157] Respondents who live outside of metro areas are excluded from these analyses.
[158] It is interesting to note that the results hold for non-white respondents as well. This adds further evidence to my claim that neighborhood context is associated with political conservatism above and beyond the aggregation of residents' demographic traits.

Hispanic)[159], *Age*, *Education* (where 0 is less than high school and 4 is a graduate degree), sex (coded 1 for *Female*), the total number of *Kids* under the age of 18 living at home, marital status (coded 1 for *Married*), and inflation adjusted *Income.*[160] I also add the variable *Mover*, that is coded 1 if the respondent lived in a different city or state when she was 16 years old and 0 if she has lived in the same city.[161] To account for the hierarchical structure of the data, I estimate a multilevel mixed-effects linear regression via maximum restricted likelihood, with random effects at the MSA level. This strategy adjusts the estimates and their errors for place-based correlations in attitudes. Table 7.3 presents the results (summary statistics are shown in appendix Table A7.2).

Table 7.3: Modern Demographic Characteristics of 1970 Neighborhoods

	β	SE	P>|z|
White, non-Hispanic	0.104	0.004	0.000
Age	-0.001	0.000	0.000
Education	0.003	0.001	0.018
Female	-0.008	0.003	0.013
Kids at home	-0.003	0.002	0.082
Married	0.019	0.004	0.000
Income	0.000	0.000	0.000
Mover	0.031	0.003	0.000
Constant	-0.057	0.009	0.000
Random effects parameter	0.069	0.005	
N	10,701		
Number of MSAs	117		

Note: Mixed effects maximum likelihood regression with random effects for MSA

[159] The GSS has a relatively small sample of non-Black racial and ethnic minorities, so I combine all nonwhite racial/ethnic categories.

[160] Approximately 10% of the observations are missing income data. I imputed observations by regressing income on age, education, gender, race, work status, marital status, the number of people in the household, the size of the city, the presence of children at home, and dummy indicators for year for the non-missing observations, generating predicted values, and replacing the missing observations with the predictions.

[161] Ideally, we would like to know whether or not the respondent moved neighborhoods as well, but the GSS does not ask this question.

The estimation reveals few surprises. For example, holding all other variables at their mean values, white respondents live in neighborhoods that were whiter than the metro area in 1970 (0.06), while respondents of color live in neighborhoods that were less white (-0.04). More educated respondents live in neighborhoods that were whiter, as do married, and higher income respondents. Respondents who had moved cities or states since they were 16 chose neighborhoods that were about 4 percentage points whiter than the metro area. Respondents who live in the same city tend to live in neighborhoods that mirrored the metro area. Those with children living at home tend to live in neighborhoods that were less white in 1970, but among middle and high-income respondents this effect reverses. That is, middle and high-income families with kids at home live in significantly whiter neighborhoods.[162] A similar interactive effect occurs with age. Among the poor, older residents live in neighborhoods that were significantly less white in 1970, but among middle and high-income residents, there is no relationship between age and neighborhood characteristics. These results point to several interesting conclusions. First, the results appear to indicate that neighborhoods that were whiter than the metro area in 1970 are more expensive and more desirable. They also suggest that sorting is likely to have played a role in the development of ideology and partisanship of particular places. Finally, these results indicate that it is necessary to control for all of these individual demographic characteristics in any estimation seeking to identify neighborhood effects. I turn to this task next.

I begin with an overview of individual-level partisan affiliation and ideology. I use the 1970 *Tract-Metro Difference in Percent White* as my independent variable in all analyses. My

[162] This interactive relationship is available upon request.

first dependent variable is the respondent's *Partisan Identification*. Respondents were asked, "generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?" Follow up questions asked for the strength of partisanship and pushed independents to identify as leaners. The resulting measure is a seven-point scale running from strong Democrat to strong Republican. Next, I analyze *Ideology* (where 1 is extremely liberal and 7 is extremely conservative), and finally *Republican Presidential Vote*, coded 1 if the respondent voted for the Republican candidate in the most recent election and 0 otherwise.[163] I control for all of the demographic traits included in Table 6.3 except one – *Mover*. I omit this variable because it is missing for a large share of the total observations. Its inclusion does not affect the results presented (and the coefficient is not significant in any of the estimations). In a second set of analyses, I add controls for current neighborhood attributes to provide additional evidence that the political character of neighborhoods was developed historically. These neighborhood variables are the *Percent White* and *Percent Homeowners* in the tract, linearly interpolated for each year of the survey. Both sets of analyses are presented in Table 7.4.

[163] For this last analysis, I use a multi-level mixed effects logistic regression to account for the binary dependent variable.

Table 7.4: Effect of 1970 Neighborhood Whiteness on Modern Partisanship & Conservatism									
	Partisan Identification			**Political Ideology**			**Republican Pres. Vote**		
	β	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	1.003	0.241	0.000	0.963	0.190	0.000	1.259	0.318	0.000
Age	-0.001	0.001	0.555	0.010	0.001	0.000	0.011	0.002	0.000
Education	-0.051	0.019	0.008	-0.113	0.015	0.000	-0.005	0.022	0.831
Female	-0.310	0.043	0.000	-0.194	0.034	0.000	-0.150	0.050	0.003
Kids at home	0.107	0.025	0.000	0.080	0.020	0.000	0.140	0.028	0.000
Married	0.326	0.049	0.000	0.342	0.039	0.000	0.303	0.056	0.000
Income ($100k)	0.417	0.058	0.000	0.177	0.046	0.000	0.477	0.066	0.000
Constant	2.845	0.091	0.000	3.590	0.071	0.000	-1.446	0.112	0.000
	β	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	0.899	0.254	0.000	0.898	0.197	0.000	1.131	0.332	0.001
Age	-0.002	0.001	0.168	0.009	0.001	0.000	0.010	0.002	0.000
Education	-0.045	0.019	0.018	-0.106	0.015	0.000	0.000	0.022	1.000
Female	-0.315	0.043	0.000	-0.198	0.034	0.000	-0.155	0.050	0.002
Kids at home	0.096	0.025	0.000	0.068	0.020	0.000	0.130	0.029	0.000
Married	0.298	0.049	0.000	0.317	0.039	0.000	0.276	0.056	0.000
Income ($100k)	0.355	0.059	0.000	0.118	0.047	0.012	0.420	0.068	0.000
% White Tract	-0.153	0.146	0.294	-0.232	0.113	0.040	-0.052	0.175	0.768
% Homeowners Tract	0.635	0.122	0.000	0.633	0.096	0.000	0.595	0.144	0.000
Constant	2.646	0.125	0.000	3.446	0.097	0.000	-1.703	0.153	0.000
Random effects parameter	0.130	0.026		0.052	0.012		0.247	0.046	
N	8,049			6,558			7,563		
Number of MSAs	116			116			116		

Note: Mixed effects maximum likelihood regression with random effects for MSA; white non-Hispanic respondents only

As was true in the aggregate, at the individual level, the historical persistence of neighborhoods is clear. Places that had defended their exclusive white character as of 1970 are home to significantly more Republican and conservative residents today. This is the case even when we account for both individual and aggregate demographic traits that predict partisanship and ideology.

The same pattern holds when I replace the dependent variable with particular policy items.[164] Respondents who live in neighborhoods that were whiter in 1970 are more likely to view government spending as adequate or too high on categories like social security, parks, and mass transit, and they are more likely to believe that individuals, not the government, should be responsible for health, wealth, and the standard of living.[165] For instance, respondents were asked to place themselves on a five-point scale where at one end the government should do more to solve our country's problems and at the other end the government should leave things to individuals and private businesses. Comparing whites who live in neighborhoods that were minority dominated in the 1970s to those who live in neighborhoods that were white defended moves responses in a conservative direction by about a half of a standard deviation on this scale (from an average of 2.8 to 3.3).

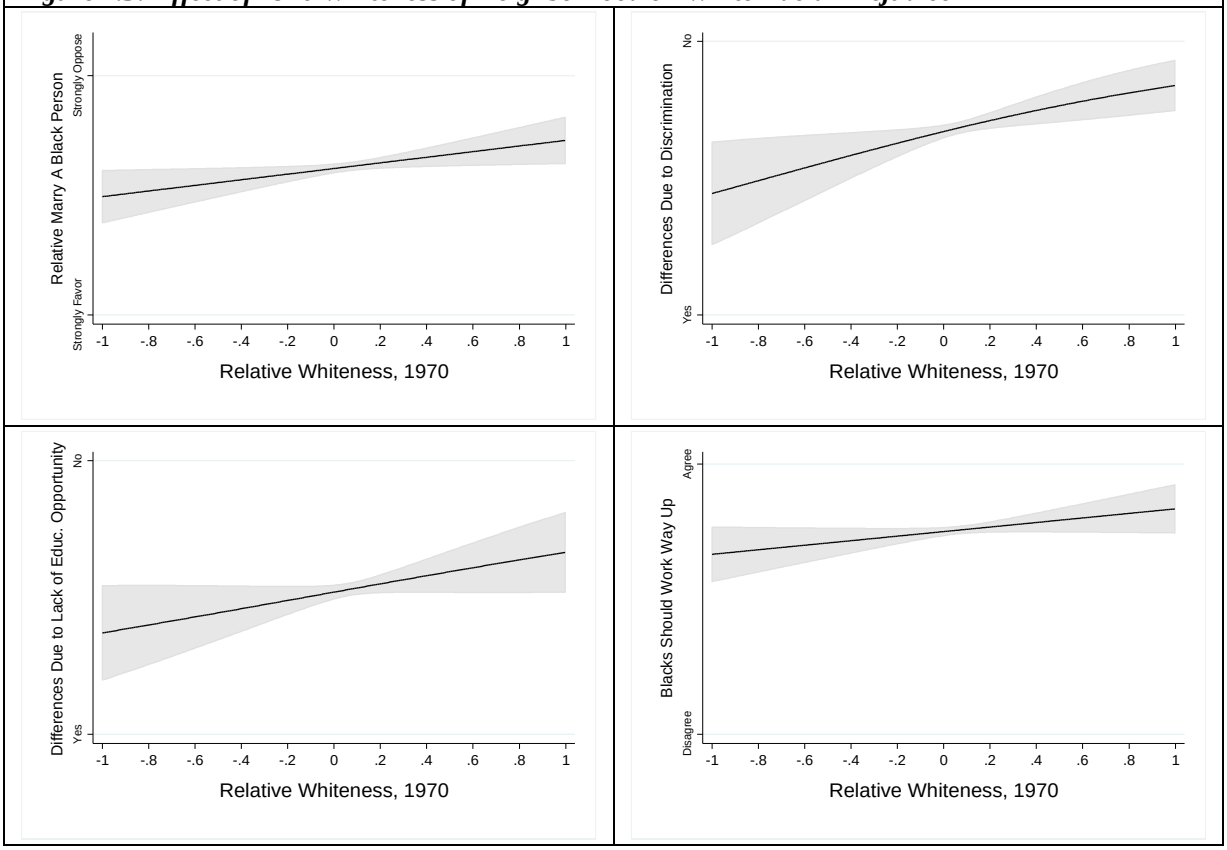
[164] These questions were not asked of all respondents in all years. As a result, in some of the specific policy areas discussed below the total number of respondents falls below 5,000. However, it never falls below 3,000.
[165] One question on which 1970 neighborhood whiteness was not associated with support for lower spending was education. When asked whether or not the government was spending the right amount "improving the nation's education system", there was no difference in the responses of individuals who live in neighborhoods that were whiter in 1970. Although this is obviously circumstantial evidence, it is plausible that the defended neighborhoods have higher quality schools and this is a feature that attracts certain residents who are supportive of higher educational expenditures.

Prejudice and Policy

If integration battles are linked to the ideology of defended neighborhoods, then we would expect residents of these places to have particularly conservative views when it comes to race. I find strong support for this contention. There are many different questions that tap racial views included in the GSS. I use several as dependent variables that are both common in the literature and have a long enough time span to generate sufficient respondents. I begin with an analysis of racial affect and prejudice. The first question asks respondents whether or not they would be in favor of having a family member marry a black person. The second question probes views on inequality. It states "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people." Then it asks: "Do you think these differences are mainly due to discrimination?" and/or "Because most (Negroes/Blacks/African-Americans) don't have the chance for education that it takes to rise out of poverty?" Finally, I analyze responses to the question, "Do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with the following statement: Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without special favors."

All dependent variables are coded so that higher values equate to a more conservative position. The structure of these analyses is the same as those included in the top panel of Table 7.4 (mixed effects maximum likelihood estimation with random effects for MSAs and controls for individual demographic characteristics). Rather than present regression tables, Figure 7.3 graphically display the marginal effects on *Tract-Metro Difference in Percent White, 1970* holding all other variables at their mean values.

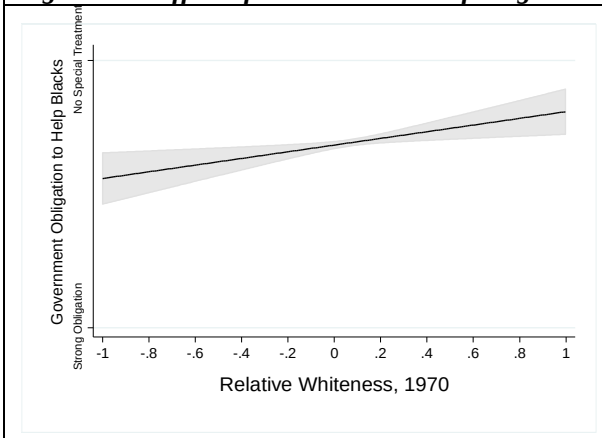
Figure 7.3: Effect of 1970 Whiteness of Neighborhood on White Racial Prejudice



The results presented in Figure 6.3 offer a consistent picture of white residents who live in neighborhoods that were whiter than the metro area in 1970. They are more strongly opposed to having a relative marry a black person, they are less likely to see persistent racial inequality in jobs, income, and housing as the result or discrimination or educational opportunities, and they are more likely to agree that blacks should have to work their way up like white ethnic groups In sum, residents of whiter neighborhoods are more likely to want to avoid close contact with blacks, to blame blacks for conditions of inequality, and put the onus on individuals to advance their position.

These attitudes translate into conservative views on race-targeted policies. To show this, I analyze two questions. The first question reads "Some people think that (Blacks/Negroes/African Americans) have been discriminated against for so long that the government has a special obligation to help improve their living standards. Others believe that the government should not be giving special treatment to (Blacks/Negroes/African Americans). Where would you place yourself on this scale?" Responses were coded on a five-point scale ranging from strong obligation to no special treatment. The second question focuses on affirmative action and asks whether or not respondents are "for or against preferential hiring and promotion of blacks." The responses are coded on a five-point scale ranging from strongly favoring to strongly opposing. Figure 7.4 presents the marginal effects of the regression of these policy responses on *Tract-Metro Difference in Percent White, 1970* holding all other variables at their mean values.

Figure 7.4: Effect of 1970 Whiteness of Neighborhood on Support for Race-Targeted Policy



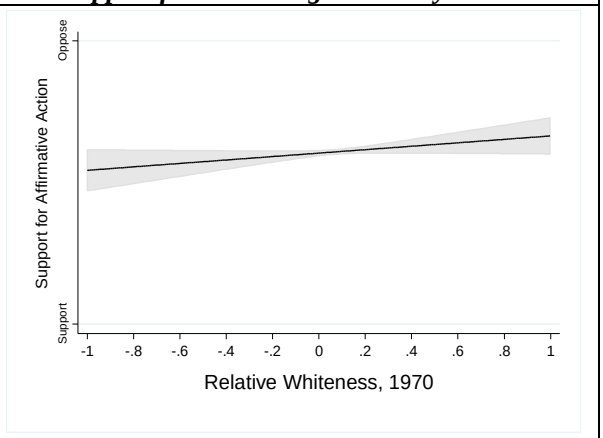


Figure 7.4 reveals that residents who live in neighborhoods that were whiter in 1970 are more likely to hold conservative views on race-targeted policy. They are less likely to feel that the

government has an obligation to make right discrimination against blacks and less likely to support affirmative action.

Conclusion

In sum, there is strong evidence that the language and ideology developed around integration battles in post-war urban America persists. During the tumultuous 1940s, 50s, and 60s, faced with changing legal and rhetorical regimes, white homeowners seeking to keep minorities out of their neighborhoods began to shed the language of racial exclusivity. They understood the defense of their homes and spaces as a defense of their rights as homeowners and freedoms as individuals. Hayward (2013) describes this as the development of an "identity story," a story about "who 'we Americans' are: about what we value, what we want and deserve, and what it is that serves our good" (p119). Hayward is clear though – the Americans included in this vision were not all Americans, but rather all *white* Americans.[166] Yet, the privileged residents of defended neighborhoods promulgated the argument that "race doesn't matter" (Hayward 2013, p176). Instead, they relied on a frame that emphasized their hard work, frugality, and investment in their children's education. This perspective persists in these places. This chapter links 1970s neighborhood demographics to feelings of distance from African Americans, a belief that racial inequality is the result of lack of individual motivation, opposition to policies that redress disparities in outcomes across racial groups, and commitment to conservatism more generally. Residents who live in defended neighborhoods today are more

[166] Hayward (2013) situates the genesis of this identity story earlier in the 20th century than I do here. She argues that it was borne of economic need among developers seeking land use planning and financial support from the government. My narrative is not incompatible with her view. It makes sense that the language adopted by rights-oriented white neighborhoods was readily available when they needed to use it. Hayward argues that the narrative of Americans as a homeowning people developed by real estate interests functioned as a "frame to many ordinary stories" (p167).

likely to identify as Republicans and more likely to vote for Republican presidential candidates.

The local roots of modern conservatism are deep.

Chapter 8: Conclusion

In the early decades of the 20th Century, homeownership rates in the United States were already much higher than in many other advanced democracies. As of 1914, in the United Kingdom 10% of households owned their homes (House of Commons Research Paper, 1999). In the United States the figure was about 45%.[167] During the late 1940s homeownership rates for France and Germany were about 31% and 27% respectively (Kohl 2014). For most families, the home was (and is) the single largest component of household wealth (Knoll et al 2014). Not only homeowners, but all property owners, land-oriented businesses (like real estate agencies), and local governments reliant on property taxes, had a strong incentive to protect and enhance the value of property. In a world of limited resources, they also had a strong incentive to politically control the distribution of public goods increasingly offered to city dwellers.

Yet, homeownership and political power were not equally available to all urban residents. In 1900, the homeownership rate among whites was more than double the rate among blacks (Collins and Margo 1999). Chinese and Japanese immigrants were barred from owning property completely in many states, and everywhere the vast majority of blacks, Asians, and Latinos were prohibited from voting (Keyssar 2000). Thus, as America became an urban nation, it was white property owners who dictated the policies of local governments. They used their power to pursue segregation. By invoking the power of land use regulation and zoning, city governments institutionalized prevailing race and class hierarchies.

In cities across the country, "Chinatowns" (McWilliams 1964, p105), Sonoratowns (Torres-Rouff 2013, p139) and "Niggertowns (Litwack 2004, p9) were walled-off by a combination of public policy, violence, and custom. Local governments then proceeded to

[167] https://www.census.gov/hhes/www/housing/census/historic/owner.html

systematically underinvest in these neighborhoods, denying them adequate sewers, paved roads, garbage collection, or public health initiatives. By the onset of the Second World War, city governments had become proficient segregators. When millions of dollars were spent renewing and rebuilding urban communities, segregation was reinforced and deepened.

By the hands of local governments the foundation of Sampson's (2012) powerful 21st century neighborhood effects, was laid. Using Chicago as a lens with which to view large, diverse cities, Sampson shows that today, neighborhoods differ significantly with respect to "crime, poverty, child health, protest, leadership networks, civic engagement, home foreclosures, teen births, altruism, mobility flows, collective efficacy, [and] immigration" (p6). These differences, Patrick Sharkey (2013) explains, are "*not* attributable primarily to factors that lie within the home or within the individual," but rather to the place itself, passed down from generation to generation (p21). Sampson (2012) argues that, as a result of racial segregation, neighborhood disadvantage is "most pronounced in the black community." These inequalities, Sampson tells us are, "durable and multiplex but not inevitable or natural" (p99).

The consequences are irrefutable. Scholars have persuasively demonstrated that segregation causes higher poverty rates for blacks and lower poverty rates for whites (Ananat 2011), lower high school and college graduation rates among blacks (Cutler and Glaeser 1997), higher imprisonment rates (Burch 2014), and higher rates of single-motherhood among blacks (Cutler and Glaeser 1997). Neighborhood disadvantage is also related to black/white income inequality, lack of employment stability among blacks, and larger gaps in cognitive skills between blacks and whites (Sharkey 2013). Cohen and Dawson (1993) show that neighborhood poverty undermines blacks' attachment to and involvement in the political system. I've shown that segregation leads to racial political polarization and underfunding of public goods.

Cumulatively, these results suggest that both growing up and living in disadvantaged places, while not wholly determining one's fate (e.g. Vance 2016), does leave little margin for error. "Mobility out of the poorest neighborhoods," Sharkey (2013) says "may be even less common than mobility out of individual poverty" (p35). Perversely, home ownership in this environment serves to limit mobility rather than enhance it.

In the first half of the 20th century, advantaged and disadvantaged neighborhoods resided within the political boundaries of large central cities. In the second half of the century, when the suburbs captured most of the population growth, the physical, and more importantly political, distance between advantage and disadvantage widened. Today, the most advantaged places are located outside of central cities altogether so that the most disadvantaged residents have no direct role to play in decisions about building affordable housing, expanding public transportation, or diversifying schools. In these places residents are more politically conservative; they vote at higher rates for Republican presidential candidates, support low taxes, want limited spending, and see inequality as the result of individual failings. Recent research suggests that privatization of public services is the most recent response to integration. Trounstine (2015) finds that a greater share of communities' security and educational needs are met through private provision in more diverse communities. Similarly, Betts and Fairlie (2003) show that native-born American families are more likely to send their children to private high school in response to increased immigration. Given this distribution of preferences and opinions, proposals to reduce inequality through mechanisms like regional governments or tax-base sharing (e.g. Orfield 2002, Katz 1999) are simply politically infeasible.

However, moving the policy debate to the state or federal level, could be more workable. Given that property owners' anxiety about protecting their investment is the driver of the many

patterns I reveal in this text, one solution would be to address this concern directly. William Fischel (2015), has argued that reducing federal tax-subsidies for owner-occupied housing would curtail homeowner demands for exclusivity.

State governments may also be able to make significant progress in generating outcomes that approach equality. There are lessons to be learned from the history of public school provision and finance. In a detailed historical analysis comparing the Charlotte and Atlanta metropolitan areas, Lassiter (2006), finds that the large geographic footprint of Charlotte's school system ensured that school integration would be successful. Conversely, Atlanta's fragmentation ensured that it failed. This indicates that states could analyze school district and municipality incorporation with an eye toward integration; limiting fragmentation and opportunities for segregation. Lafortune, Rothstein, and Schanzenbach (2015) show that recent school finance equalization policies have focused not on the gap in funding between advantaged and disadvantaged districts, but rather on ensuring a minimum adequate level of funding for all districts. They find that these reforms significantly reduce inequalities in student achievement outcomes between districts.

School finance reform has been possible because state constitutions guarantee the provision of public schooling and lawsuits (and threats of lawsuits), have forced the hand of state legislatures. Education is not the only public good guaranteed in state constitutions though. In fact, state constitutions are the locus of many positive rights. As Zackin (2013) details, they also obligate state governments to "care the poor, aged, and mentally ill, preserve the natural environment…and protect debtors' homes and dignity" (p3). Bridges (2015) demonstrates that state constitutions provide state governments substantial authority in the regulation of water provision and the protection of labor. Leonard (2010) outlines state constitutional requirements

mandating provision of health care and public health. Thus, the centralization of public goods financing, or at least the provision of a minimum level of public goods support through state governments is possible, though obviously politically contentious. At the end of the day, what is clear is that much is at stake in the local provision of public goods and the politics of segregation.

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Data Appendix

Chapter 1

Coding of Foreign Born Populations 1900-1940

The Census of Population and Housing collected detailed breakdowns regarding the origin of immigrant populations for large cities between 1900 and 1940. However, the categories of origin changed from Census to Census. I created similar categories by combining subcategories (e.g. I created a Poland variable by combining Austrian Poland, German Poland, and Russian Poland). Using the table available at: http://www.census.gov/population/www/documentation/twps0029/tab04.html, I created a category of immigrants from Southern and Eastern Europe, Asia, and Latin America. Because immigrants from Turkey in Asia were only separately categorized in some Census years, all Turkish immigrants are coded as being Southern and Eastern European, regardless of continent. The category foreign born nonwhite was created by adding the foreign born populations from countries that the 1930 Census designated as sending a majority of immigrants who were classified as nonwhite (China, Japan, India, Mexico, and West Indies).[168] To generate a measure of foreign born diversity, I calculated a Herfindahl Index:

$$Diversity = 1 - \sum_{f=1}^{F} \pi_f^2$$

where, π_f is the population share of the foreign-born group f and F is the total number of foreign-born groups (52). The following foreign born groups were listed in Censuses 1900-1940. The table presents summary statistics for all 291 cities included in these data.

Country of Origin	Mean	Std. Dev.	Min	Max
Africa	0.01%	0.04%	0.00%	1.20%
Albania	0.00%	0.03%	0.00%	0.86%
Armenia	0.14%	0.56%	0.00%	13.11%
Atlantic islands	0.07%	0.82%	0.00%	22.96%
Australia	0.04%	0.11%	0.00%	1.27%
Austria	3.57%	4.23%	0.00%	52.56%
Azores	0.09%	1.02%	0.00%	18.64%
Belgium Luxemburg	0.48%	1.78%	0.00%	25.12%
Bohemia	0.11%	1.24%	0.00%	48.24%
Born at sea	0.00%	0.01%	0.00%	0.21%
Canada newfound	10.15%	12.52%	0.00%	86.47%
Central South America	0.15%	0.34%	0.00%	5.57%
China	0.34%	1.20%	0.00%	39.04%
Cuba West Indies	0.14%	1.23%	0.00%	43.85%
Czechoslovakia	1.41%	3.69%	0.00%	49.42%
Denmark	1.22%	2.67%	0.00%	29.90%
England	8.04%	4.65%	0.28%	40.52%

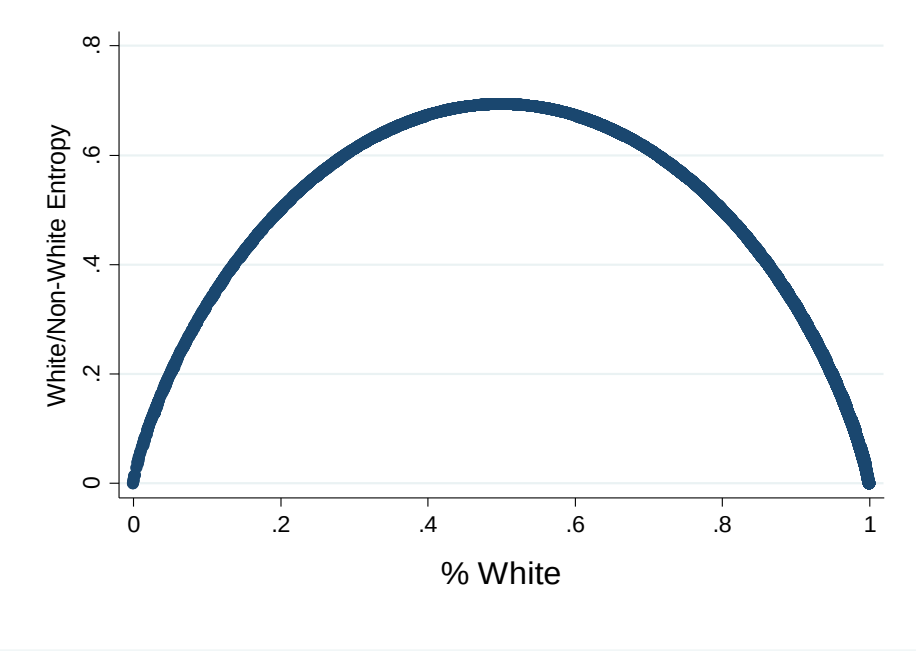
[168] Census of Population and Housing, 1930, Volume II, Chapter 5, "Country of Birth of the Foreign Born," page 231

Estonia	0.00%	0.00%	0.00%	0.02%
Europe, other	0.06%	0.14%	0.00%	3.17%
Finland	0.46%	1.70%	0.00%	21.42%
France	1.21%	1.25%	0.00%	14.62%
Germany	16.92%	14.66%	0.24%	89.81%
Greece	2.07%	2.58%	0.00%	23.83%
Holland	0.07%	1.09%	0.00%	46.72%
Hungary	2.44%	4.66%	0.00%	48.04%
Iceland	0.00%	0.00%	0.00%	0.08%
India	0.01%	0.02%	0.00%	0.47%
Ireland	9.71%	7.63%	0.03%	50.94%
Italy	9.47%	9.14%	0.00%	53.39%
Japan	0.24%	1.10%	0.00%	32.07%
Latvia	0.03%	0.16%	0.00%	2.76%
Lithuania	0.67%	1.48%	0.00%	12.26%
Mexico	1.48%	6.60%	0.00%	91.42%
Netherlands	0.86%	3.92%	0.00%	50.24%
Norway	1.49%	3.43%	0.00%	27.95%
Not specified	0.00%	0.02%	0.00%	0.57%
Other	0.99%	1.71%	0.00%	18.01%
Other Asia	0.09%	0.19%	0.00%	3.08%
Pacific Islands	0.01%	0.03%	0.00%	1.71%
Palestine Syria	0.32%	1.03%	0.00%	16.14%
Poland	6.81%	7.54%	0.00%	78.19%
Portugal	0.46%	1.88%	0.00%	18.82%
Russia	8.40%	7.06%	0.00%	71.83%
Scotland	2.62%	2.02%	0.05%	44.49%
Spain	0.29%	1.52%	0.00%	24.06%
Sweden	4.11%	7.00%	0.00%	71.64%
Switzerland	0.96%	1.09%	0.00%	9.27%
Syria	0.31%	0.92%	0.00%	15.72%
Turkey Bulgaria Romania	0.66%	1.09%	0.00%	16.93%
Wales	0.71%	1.60%	0.00%	26.78%
West Indies	0.28%	2.08%	0.00%	71.70%
Yugoslavia	0.72%	1.98%	0.00%	23.65%

A1.1: Summary Statistics Historical City Expenditures

Variable	N	Mean	Std. Dev.	Min	Max
Expenditures Per Capita (logged)	1,397	6.165	0.512	4.075	8.936
Density	1,397	11.993	8.870	0.747	79.009
Population (logged)	1,397	11.401	0.944	9.333	15.792
% Nonwhite	1,116	0.107	0.128	-0.031	0.558
% Homeowners	1,111	0.377	0.100	0.100	0.697
Foreign born diversity	1,057	0.834	0.089	0.233	0.938
Assessed Value (millions)	1,397	2.442	10.024	0.005	199.837
% Professionals	1,084	0.083	0.031	0.016	0.257

Figure A1.1: Relationship between City Level Entropy and % White



Chapter 2

Table A2.1: Summary Statistics Zoning Ordinances

Variable	Obs	Mean	Std. Dev	Min	Max
Zoning Ordinance	4,293	0.032	0.175	0.000	1.000
Expenditure $ Per Capita (logged)	4,293	3.346	0.413	1.305	6.165
Property Taxes $ Per Capita	4,293	19.798	8.045	1.794	66.837
Presidential turnout	4,293	0.514	0.177	0.013	0.991
Republican Vote Share	4,293	0.471	0.171	0.000	0.838
Midwest	4,293	0.314	0.464	0.000	1.000
North	4,293	0.422	0.494	0.000	1.000
South	4,293	0.195	0.396	0.000	1.000
West	4,293	0.070	0.255	0.000	1.000
% For. Born White	3,740	0.182	0.116	0.006	0.603
% For. Born Non White	3,740	0.005	0.024	0.000	0.398
% Black	3,654	0.081	0.125	0.000	0.557
Highways $ Per Capita	4,265	2.379	1.027	0.230	8.014
Health $ Per Capita	4,288	0.411	0.328	0.015	3.525
Fire $ Per Capita	4,293	2.148	0.815	0.364	10.945
Density	4,283	11.732	8.414	0.747	79.009
% Renters	3,577	0.628	0.101	0.303	0.903
% Employed in Manufacturing	3,554	0.533	0.137	0.109	0.838
% Employed in Agriculture	3,554	0.017	0.043	0.002	0.767
10 year population growth rate	3,592	0.327	0.410	-0.867	5.397
School segregation	4,293	0.223	0.412	0.000	1.000
% Unemployed	3,554	0.635	0.064	0.000	0.820

Chapter 3

Table A3.1: Summary Statistics Sewer Extensions, Historical Urban Ecological Dataset

Variable	Obs	Mean	Std. Dev	Min	Max
New Segments Since Last Census	541	37.20	138.45	0.00	1476.00
Total New Segments Since Last Census	541	1237.02	1953.43	0.00	5933.00
Total Segments in Ward	541	857.72	952.77	181.00	8375.00
% Segments Built	541	0.64	0.25	0.00	0.96
% Foreign Born	541	0.25	0.12	0.01	0.64
% Renters	271	0.74	0.13	0.34	0.98
Renter Segregation	541	0.09	0.03	0.04	0.14
% Black	541	0.08	0.14	0.00	0.95
Racial Segregation	541	0.47	0.16	0.29	0.86

Table A3.2: Summary Statistics: Public Sewer Connections

Variable	Obs	Mean	Std. Dev	Min	Max
% Public Sewer in Tract	146,102	0.773	0.328	0.000	1.000
% Nonwhite	146,102	0.203	0.280	0.000	1.000
Racial Segregation	146,102	0.216	0.197	0.000	0.915
% Renters	146,102	0.356	0.238	0.000	1.000
Renter Segregation	146,102	0.115	0.086	0.000	0.786
% Wealthy	146,102	0.183	0.155	0.000	1.000
City Population	146,102	392911	686109	59	3480384
City Public Sewer Connections	146,102	139100	261531	0.000	1269144
Midwest	146,102	0.234	0.423	0.000	1.000
South	146,102	0.307	0.461	0.000	1.000
West	146,102	0.229	0.421	0.000	1.000

Chapter 4

Table A4.1: Summary Statistics: Urban Renewal Applications and Disbursement

Variable	Obs	Mean	Std. Dev.	Min	Max
Racial Segregation, 1980	172	0.299	0.158	0.015	0.671
Renter Segregation, 1980	172	0.139	0.053	0.014	0.284
Urban Renewal Funds Approved, $100 million	173	0.466	0.734	0.000	5.481
Urban Renewal Funds Disbursed, $100 million	173	0.315	0.536	0.000	4.165
Segregation, 1950	173	0.398	0.153	0.095	0.908
% Owner occupied, 1950	173	47.127	11.692	12.400	70.700
Median Home Value, 1950 (log)	173	9.0	0.3	8.4	9.9
% Dilapidated, 1950	172	6.7	4.9	0.5	26.1
% Built Pre-1920, 1950	172	56.8	17.6	6.1	94.6
% Units w/o Plumbing, 1950	172	22.4	12.5	2.8	62.4
Population (millions), 1950	173	277794.0	702673.5	38946.0	7891957.0
% Nonwhite, 1950	173	11.7	11.9	0.1	44.0
% Employed Manufacturing, 1950	173	31.2	13.7	6.6	64.9
% Employed, 1950	173	94.6	1.9	88.3	98.0
Median Education, 1950	173	10.1	1.2	7.9	12.7
Family Income, 1950 (log)	173	8.1	0.1	7.6	8.6
% Incomes Below $2000, 1950	173	21.4	7.5	10.0	48.8
% Housing Operations	170	0.017	0.020	0.000	0.115
Public Housing Units Per Capita	173	1104.9	802.8	0.0	3819.0

Table A4.2 Summary Statistics Open Housing Initiative Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Opposed to Fair Housing	4,860	0.630	0.483	0	1
Democratic Presidential Voter	4,860	0.591	0.492	0	1
Home Owner	4,860	0.712	0.453	0	1
Education Level	4,860	3.305	1.365	1	6
Age	4,860	3.021	1.535	1	6
Economic Level	4,860	5.007	1.755	1	10
White	4,860	0.933	0.250	0	1
Union Member	4,860	0.305	0.461	0	1

Chapter 5

Table A5.1: Summary Statistics Segregation Across Cities

Variable	Obs	Mean	Std. Dev.	Min	Max
Across-City Share of Racial Segregation	618	0.4080	0.1799	0.0000	0.8793
Across-City Share of Renter Segregation	618	0.3501	0.1481	0.0000	0.8021
Across-City Share of Wealthy Segregation	618	0.2909	0.1737	0.0000	0.7650
Minority Mayor	618	0.2751	0.4469	0.0000	1.0000
Direct General Expenditure Per Capita	618	1.3443	0.9529	0.3131	9.9550
% Spent on Policing	618	0.1408	0.0511	0.0393	0.3244
Crime Rate	618	0.0917	0.0426	0.0000	0.4194
Population (logged)	618	12.0515	0.9916	9.8635	15.1231

Chapter 6

Table A6.1: Summary Statistics Racial Polarization Data

Variable	Obs	Mean	Std. Dev.	Min	Max
Largest Racial Divide	91	0.481	0.213	0.016	0.934
H Index – multi-group	91	0.376	0.119	0.183	0.635
H Index – two-group	91	0.353	0.114	0.156	0.614
Diversity	91	0.623	0.088	0.323	0.736
% Asian	91	0.067	0.074	0.008	0.318
% Black	91	0.275	0.181	0.030	0.815
% Latino	91	0.229	0.155	0.009	0.605
Median HH Income	91	36725	10114	17268	75982
% Renters	91	0.535	0.092	0.368	0.718
% College Ed	91	0.167	0.056	0.049	0.359
Biracial contest	91	0.725	0.449	0	1
Nonpartisan Election	91	0.714	0.454	0	1
Primary Election	91	0.352	0.480	0	1
Population (logged)	91	14.166	0.826	13.065	15.921
White Ideology	86	3.835	0.648	2.667	5.250

Table A6.2: Cities included in Racial Polarization Data

	Segregation		Largest Racial Divide, Number of Elections		
City Name	Mean H Index Multi-Group	Mean H Index Two-Group	Black/White	Latino/White	Black/Latino
Austin, TX	0.204	0.208	1		
Baltimore, MD	0.510	0.516	3	1	
Charlotte, NC	0.269	0.287	2		
Chicago, IL	0.572	0.460	7		1
Cleveland, OH	0.558	0.531	2		
Columbus, OH	0.316	0.284	3		1
Dallas, TX	0.359	0.339	4		1
Denver, CO	0.289	0.254	1	2	
Detroit, MI	0.398	0.255	1		1
Houston, TX	0.339	0.308	7		2
Indianapolis, IN	0.292	0.293			1
Jacksonville, FL	0.233	0.222	2		
Los Angeles, CA	0.351	0.366	3		5
Memphis, TN	0.470	0.474	2		
Milwaukee, WI	0.423	0.360	3		
New York, NY	0.468	0.474	5	3	1
Oklahoma, OK	0.231	0.165	1		
Philadelphia, PA	0.492	0.487	5		
Phoenix, AZ	0.255	0.270		1	
San Antonio, TX	0.237	0.225		4	
San Diego, CA	0.255	0.266	3		1
San Francisco, CA	0.223	0.161	3		1
San Jose, CA	0.186	0.198		2	1
Tucson, AZ	0.185	0.192	1		
Washington, DC	0.464	0.491	3		

Table A6.3: Summary Statistics Census of Government Finance and Population

Variable	Obs	Mean	SD	Min	Max
Direct General Expend per cap	16,831	1.332	1.304	0.022	78.010
Highways per cap	16,642	0.090	0.060	0.000	1.225
Parks per cap	16,673	0.209	0.109	0.000	1.746
Police per cap	15,809	0.069	0.073	0.000	2.564
Sewers per cap	13,832	0.106	0.089	0.000	1.762
Welfare, Health & Housing per cap	13,203	0.066	0.156	0.000	6.321
Own Source Revenue per cap	16,830	1.065	1.174	0.020	84.284
Two-Group H Index	16,831	0.074	0.094	0.000	0.767
Diversity	16,831	0.321	0.190	0.005	0.778
% Black	16,831	0.099	0.153	0.000	0.980
% Asian	16,831	0.034	0.057	0.000	0.674
% Latino	16,831	0.111	0.165	0.000	0.987
5 yr Δ % Black	14,284	0.007	0.019	-0.101	0.229
5 yr Δ % Latino	14,284	0.016	0.020	-0.171	0.207
5 yr Δ % Asian	14,284	0.005	0.011	-0.056	0.128
Median income	16,831	60112	24654	17320	266887
% Local Gov Employees	16,831	3.364	0.992	0.302	11.606
% Renters	16,831	0.358	0.140	0.009	0.911
% Over 65	16,831	0.127	0.051	0.007	0.798
% College degree	16,831	0.167	0.103	0.003	0.618
Population (logged)	16,831	10.107	1.030	6.071	15.921
City Ideology	2,524	4.028	0.788	1.000	7.000
Population	16,831	52940	205791	433	8214426

Table A6.4: First Stage Regression of Segregation on Waterways and Population

	Direct General Expenditure		
	β	SE	P>|t|
# Waterways	0.005	0.00	0.00
Population(logged)	0.028	0.00	0.00
Lagged DV	0.000	0.00	0.00
Diversity	0.085	0.00	0.00
% Black	0.137	0.00	0.00
% Asian	-0.209	0.01	0.00
% Latino	0.001	0.00	0.69
Median Income (1000s)	0.000	0.00	0.00
% Local Gov. Employees	-0.001	0.00	0.01
% Renters	0.011	0.00	0.00
% Over 65	0.255	0.01	0.00
% College Grad	-0.003	0.01	0.66
Constant	-0.271	0.00	0.00
N	25,669		

Note: First stage of two stage least squares regressions with fixed effects for regions and year (not shown); Instrumented: Two-group H Index of segregation; Excluded Instruments: # of Waterways, Population logged

Table A6.5: Summary Statistics Sewer Overflows, EPA

Variable	Obs	Mean	SD	Min	Max
Logged Overflows per capita	1,417	0.508	1.353	0.000	25.548
Racial Segregation	1,417	0.028	0.060	0.000	0.559
Population (logged)	1,417	8.414	1.701	3.091	15.122
% Renters	1,417	0.324	0.124	0.000	0.796
% Urban	1,417	0.609	0.467	0.000	1.000
% Black	1,417	0.086	0.164	0.000	0.978
% Asian	1,417	0.012	0.025	0.000	0.314
% Latino	1,417	0.053	0.092	0.000	0.884
Median Income (1000s)	1,417	37623	14287	13516	190805
Subventions Per Capita (1000s)	1,417	391.648	1397.263	0.000	50670.790

Chapter 7

Table A7.1 Summary Statistics: Democratic Vote Share, 2008, Harvard Elections Database Archive

Variable	Obs	Mean	Std. Dev.	Min	Max
% Democratic Vote, 2008	44,958	0.623	0.200	0.054	1.000
Tract-Metro Difference in % White, 1970	44,958	0.019	0.216	-0.939	0.553
% White 2000	44,958	0.637	0.320	0.000	1.000
% Renters 2000	44,958	0.377	0.249	0.000	1.000
% Wealthy 2000	44,958	0.167	0.159	0.000	1.000
Density	44,958	0.003	0.005	0.000	0.089
Midwest	44,958	0.241	0.427	0.000	1.000
South	44,958	0.298	0.458	0.000	1.000
West	44,958	0.226	0.418	0.000	1.000
Proportional Tract-Metro Elevation Diff.	44,956	-0.195	0.556	-1.007	19.336
Waterfront Tract	44,958	0.203	0.402	0.000	1.000
Distance to City Center (logged)	44,958	9.692	1.010	3.643	12.228

Table A7.2 Summary Statistics: Modern Partisanship and Conservatism, General Social Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Partisan Identification	11,674	2.680	1.953	0.000	6.000
Political Ideology	9,376	4.039	1.419	1.000	7.000
Republican Pres. Vote	10,804	0.334	0.472	0.000	1.000
Tract-Metro Difference in % White, 1970	11,674	0.039	0.182	-0.863	0.342
White, non-Hispanic	11,674	0.689	0.463	0.000	1.000
Ago	11,674	46	17	18	89
Education	11,674	1.624	1.213	0.000	4.000
Female	11,674	0.555	0.497	0.000	1.000
Kids at home	11,674	0.617	1.049	0.000	8.000
Married	11,674	0.457	0.498	0.000	1.000
Income	11,674	51987	42442	407	178266
Mover	10,640	0.617	0.486	0.000	1.000
% White Tract	11,674	0.649	0.296	0.000	0.994
% Homeowners Tract	11,674	0.617	0.247	0.000	0.995

ATTACHMENT TO LETTER 46

Segregation by Design

By Jessica Trounstine
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Abstract:
Over the course of the 20th century the spatial scale of residential segregation along race and class lines increased. In the late 1800s, whites and people of color, renters and owners, poor and wealthy, were separated from each other in small clusters, so that residential segregation occurred block-to-block. By the middle of the 20th century segregation patterns had transformed; residents became segregated neighborhood-to-neighborhood. Throughout the post-war period, segregation between whole cities rose as the nation suburbanized. In recent decades, city-to-city segregation has remained remarkably persistent despite increasing neighborhood integration. Because political representation is geographically determined, these changing patterns have had profound political consequences – generating opportunities for exclusion and increasing polarization. I argue that local governments have been instrumental in driving and shaping these patterns; and they have done so largely in the name of protecting both property values and exclusive access to public goods for white property owners. When property values and public goods exclusivity were threatened, property owners changed their tactics – shifting the spatial of segregation higher. This process has always been Segregation by Design.

Conventional wisdom holds that segregation and the resulting deficit in services that the poor and people of color experience in American cities is driven by a combination of individual racial prejudices, market logic, and federal policy. This is an insufficient account because it ignores the institutional setting in which racism, economics, and federal law are embedded. Local politics structures the way in which *all* of these forces unfold.

Using qualitative historical evidence from large cities throughout the United States and quantitative data from hundreds of cities, I demonstrate that segregation and the unequal distribution of public goods accruing to individuals and neighborhoods are a function of local policies and political battles. Land-use planning, zoning, and redevelopment have been utilized by white homeowners and businesses seeking to enhance property values and monopolize public goods to generate segregation and inequality in access to benefits for over 100 years.

The changing spatial patterns of segregation have had important implications for political representation. Poor and minority residents have become more isolated and less able to secure political responsiveness and public benefits. In turn, segregation affects both local and national politics. In cities, segregated communities are more polarized and less willing to fund public goods. At the national level, neighborhoods that successfully resisted integration during the civil rights era are markedly more conservative today.

Instead of receding, segregation within cities and between cities and suburbs has grown over the past several decades, further antagonizing the imbalance of public benefits between the haves and the have-nots.

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Introduction

"Segregated people in a nation that professes to be a democracy soon become a frustrated people. Those who segregate others soon become frightened, insecure people forced to accept and invent prejudice to justify their actions" Robert C. Weaver, *The Negro Ghetto*, 1948

City services sustain, prolong, and even save lives. In the latter half of the 19th century, urban American began a rapid ascent. City populations and economies were booming. But so too were their filth, their disease, and their divisions. By 1900, infectious and parasitic diseases killed nearly 8 in every 1,000 residents; accounting for more than 45% of all deaths (Tippett 2014) and more than 60% of deaths in children (Guyer et al 2000).[1] Between 1900 and 1940, the overall mortality rate in the United States declined by 35%[2] (Linder and Grove 1947) and the infectious disease mortality rate declined by 75% (CDC 1999).[3] In some cities in 1900, 30% of babies would not live to celebrate their first birthday (Meckel 1990). Estimates indicate that between one quarter and one half the decline in total mortality can be attributed to the development of public water and sewer systems. Local public works significantly reduced outbreaks of diseases like cholera, typhoid fever, diarrheal diseases, and malaria (Cutler and Miller 2006, Troesken 2004).[4] Over time, the growth of municipal fire and police forces, street cleaning and refuse disposal, childhood vaccination and physical examination programs, regulation of food supplies (e.g. requirements for milk pasteurization), and the implementation of

[1] Pediatrics. 2000 Dec;106(6):1307-17. Annual summary of vital statistics: trends in the health of Americans during the 20th century. Guyer B1, Freedman MA, Strobino DM, Sondik EJ.
[2] Total mortality declined from 17 per 1,000 persons to 11 per 1,000 persons.
[3] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4829a1.htm#fig1
[4] It is important to note that the dramatic improvement in mortality from water and sewer systems required the development of filtration and treatment techniques, which were not immediately available when the systems were first built.

building codes all worked to prolong life expectancy (Condran and Cheney 1982, Haines 2001, CDC 1999).

However, such benefits were neither inevitable nor universal. From the beginning poor and minority neighborhoods received fewer and lower quality services: they were less likely to be connected to sewers, have graded and paved streets, or benefit from disease mitigation programs.[5] Today, the quality of public goods in the United States remains highly variable. Some people have access to well-paved and plowed roads, sewers that never overflow, public parks with swing sets and restrooms, adequately staffed police and fire forces, and clean water. Others do not have access to these resources. The quality of such services is largely a function of the neighborhood, city, and state in which a person resides. The degree to which the poor and people of color have been concentrated into identifiable residential locations (e.g. segregation), varies from place and to place, and everywhere has changed dramatically over time.

Over the course of the 20th century the spatial scale of residential segregation along race and class lines increased (Logan et al 2015, Reardon et al 2009, Lee et al 2008). In the late 1800s, whites and people of color, renters and owners, poor and wealthy, were separated from each other in small clusters, so that residential segregation occurred block-to-block. By the middle of the 20th century segregation patterns had transformed; residents became segregated neighborhood-to-neighborhood. Throughout the post-war period, segregation between whole cities rose as the nation suburbanized. In recent decades, city-to-city segregation has remained remarkably persistent despite increasing neighborhood integration. Because political representation is geographically determined, these changing patterns have had profound political

[5] This book explores race and class divisions in local politics and residential locations. There are many ways one might go about defining these groups. As explained in more detail in Chapter 1, I focus on divisions between whites and nonwhites, and homeowners and renters. I use the terms minority and nonwhite interchangeably. I also use the terms black and African American interchangeably.

consequences – generating opportunities for exclusion and increasing polarization. I argue that local governments have been instrumental in driving and shaping these patterns; and they have done so largely in the name of protecting both property values and exclusive access to public goods for white property owners. When property values and public goods exclusivity were threatened, property owners changed their tactics – shifting the spatial of segregation higher. This process has always been Segregation by Design.

An example from Southern New Jersey is illustrative. Camden and Cherry Hill, New Jersey are similarly sized cities, just across the Delaware River from Philadelphia. Camden is home to two superfund (toxic waste) sites; Cherry Hill is home to none.[6] In Camden only 1.7% of state roads had good pavement in 2004[7] compared to 35% in Cherry Hill.[8] Camden has 22 combined sewer overflow outfalls (where raw sewage and storm water may be released to the surface during wet weather), while Cherry Hill has zero. Camden offers no e-waste recycling and no yard waste collection; Cherry Hill provides both. In 2012, Camden's water supply ran so low that residents were required to boil water for consumption and were prohibited from watering their gardens.[9] In contrast, Cherry Hill has a clean, plentiful water supply. The Cherry Hill Public Library has more than 400,000 circulating materials, more than 300 adult programs and classes, and 67 public computers.[10] In 2011, Camden shuttered the doors of its main library and handed control of the remaining two small branches to the county.[11] Cherry Hill offers 63 recreational facilities (parks, art centers, tennis courts, etc.) for its residents and supports 13

[6] https://www.epa.gov/superfund/search-superfund-sites-where-you-live
[7] http://www.state.nj.us/transportation/works/njchoices/pdf/camden.pdf
[8] Personal communication with New Jersey Department of Transportation. The NJDOT provided data from the NJDOT Pavement Management System by email. Available from the author by request.
[9] http://www.nj.com/news/index.ssf/2012/06/camden_residents_advised_to_bo.html
[10] http://www.chplnj.org/about/documents/2015%20Annual%20Report%20-%20FINAL.pdf
[11] http://www.nj.com/news/index.ssf/2011/02/main_branch_of_camden_public_l.html

different swim clubs.[12] Camden has 25 parks and 8 community centers.[13] Between 2007 and 2012, Camden's city budget declined by about $245 per resident, while Cherry Hill's increased by about $12 per capita. Clearly, living in Camden is unlike living in Cherry Hill. So, how did Cherry Hill and Camden get to be so different?

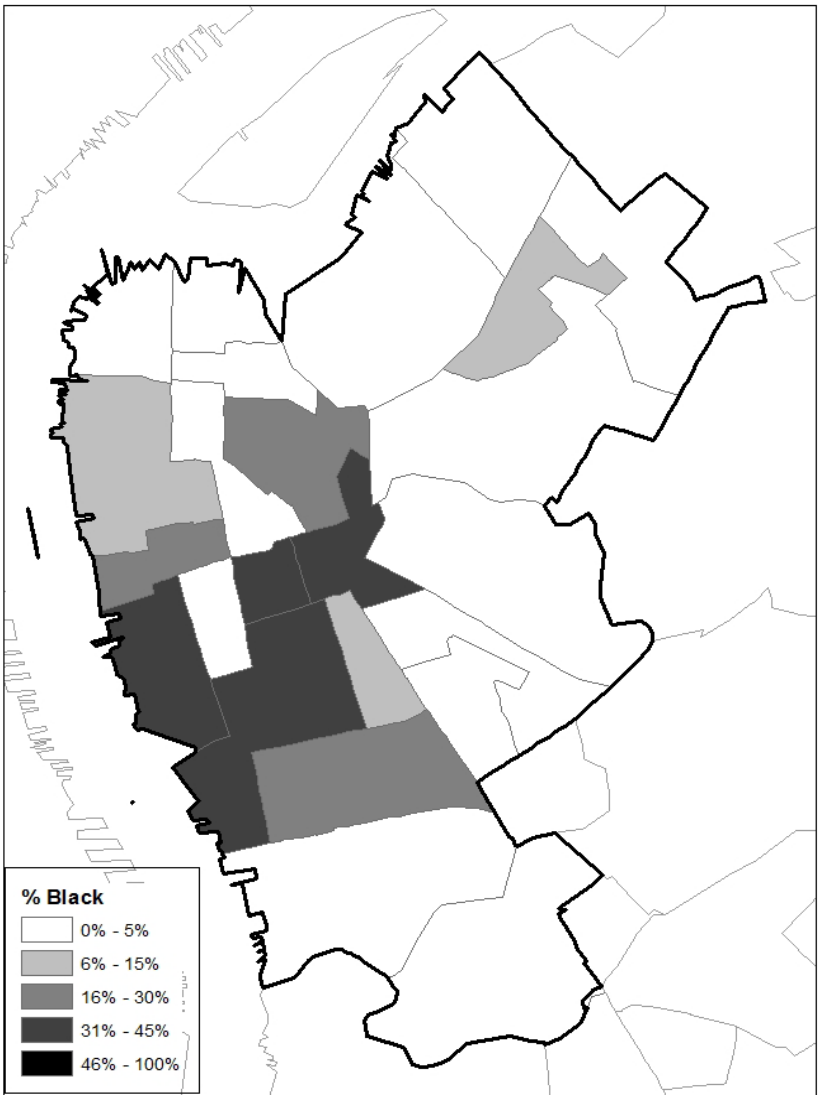
The story begins with a focus on Camden at the turn of the century. Although Cherry Hill was incorporated as a municipality in 1844, it remained a small, undeveloped agricultural community in the first few decades of the 20th century. In 1900, Camden had a population of nearly 76,000 residents. The city boasted 55 miles of sewers, 79 miles of water mains, and about 38% of the city's streets were paved; figures that suggest that Camden's development was right in-line with national averages. Also similar to other cities, were Camden's level of race and class segregation. By the turn of the century, Camden was home to two well-established free black communities named Fettersville and Kaighnsville (Garwood 1999). Established in the 1830s (Fettersville) and 1840s (Kaighnsville), these communities were comprised of small lots affordable to people of modest incomes, many of whom were African American (Garwood 1999). One of Fettersville's neighborhood churches, the Macedonia African Methodist Episcopal Church, was believed to be a stop on the Underground Railroad (Garwood 1999). While the majority of Camden's black residents lived in Fettersville and Kaighnsville, both neighborhoods were predominately populated with white, working-class residents.

According to the 1900 Census, the wards representing Fettersville and Kaighnsville were about a quarter African American. For a city in which African Americans only comprised 8% of the total population, clearly, blacks were not evenly spread across the city. But, the extent and scale of black segregation would increase dramatically by 1940. By 1940, the share of black

[12] http://www.cherryhill-nj.com/Facilities
[13] http://ecode360.com/8508679

residents had increased to 11%, but this growth in the black population was concentrated geographically in the central and southern parts of town. Figure 1 shows that by 1940, the black concentration in parts of Camden exceeded 50%.

Figure 1: Segregation in Camden, 1940



The creation of Camden's segregated neighborhoods echoed the creation of segregated neighborhoods throughout the United States. Camden city government used zoning laws, the placement of segregated schools, and public housing to create and enforce residential segregation between whites and Africans Americans, as well as between renters and homeowners. New Jersey's zoning enabling statute specified that regulations "must be made with reasonable

consideration, among other things…with a view of conserving the value of property," (Cunningham 1965). Camden first authorized zoning in 1928 and like other early zoning adopters, moved quickly to ensure that land use policy was used strategically to protect the interests of white home-owning residents.

By 1930, Camden was a bustling central city. It had more than 118,000 residents and spent nearly $950 (in 2012 dollars) per capita on municipal expenditures – well above the national median. But the stress of the Great Depression left Camden with an enormous burden of vacant and uninhabitable properties (Housing in Camden, 1942)[14]. And, so it was one of the earliest recipients of federal slum clearance and public housing funding in the 1930s (Pommer 1978). In 1938, two buildings were erected – one for whites and one for blacks. When the program was expanded in the 1940s two more projects were built; also segregated. Unsurprisingly, the neighborhoods around each project increasingly came to reflect the race of public housing occupants (Williams 1966a[15]). Later, when Interstate 95 was run through the city, "an attempt [was] made to eliminate the Negro and Puerto Rican ghetto areas" (New Jersey State Attorney General report, quoted in Rose and Mohl 2012, p108).

Overtime, neighborhood segregation in Camden rose; climbing more than 50% in the first half of the 20th Century. As would be the case in cities throughout the United States, Camden's city government underprovided services to its black neighborhoods (Helzner 1968[16], Silvotti 1968[17])

[14] http://www.dvrbs.com/hacc/CamdenNJ-HousingAuthority.htm http://www.dvrbs.com/hacc/CamdenNJ-HousingAuthority.htm
[15] Camden Courier-Post, June 8, 1966
[16] Helzner, Gerald, Camden Courier-Post, March 7 1968, p 13
[17] Silvotti, Bert, Camden Courier-Post, March 18, 1968

Starting around the time of the Second World War, the city faced desegregation pressures on a number of different fronts. In 1881, the state of New Jersey passed a law prohibiting the segregation of schools by race (Wright 1953). But, as of 1944, no black children attended white elementary schools (Jensen 1948). When the NAACP sued the district, officials responded that black parents had simply not requested attendance at their neighborhood schools. So, the NAACP took out ads in the Camden Courier Post to convince parents to do just that. In 1947, hundreds of black children enrolled in previously all-white schools (Wright 1953).

School desegregation was just one of the first of many signs of racial transition in Camden. In 1951, the city witnessed its first biracial contest for city council when Dr. Ulysses S. Wiggins, the president of the Camden NAACP Branch, was nominated on the Republican ticket (Chicago Defender April 21, 1951). He lost, but in 1961, Elijah Perry became the city's first African American city council member (Riordan 1996[18]). In 1954, the New Jersey Supreme Court ordered public housing to be desegregated and the first black families moved into white buildings in 1966 (Williams 1966a, Williams 1966b[19]). And in 1969 and 1971, the city erupted in violent race riots, touched off by police brutality against black and Latino residents.

In 1940, the little hamlet of Cherry Hill had a population just under 6,000 residents; they were 91% white and 9% black.[20] Not only small, the city was economically weak, having defaulted on its bond obligations been placed in receivership by the state government during the Depression (Shay v Delaware 122 N.J.L. 313, 316 (N.J. 1939), Cammarota 2001). But after the war, while housing and schools in Camden were integrating, Cherry Hill's population and economy exploded, as was true of suburbs throughout the nation.

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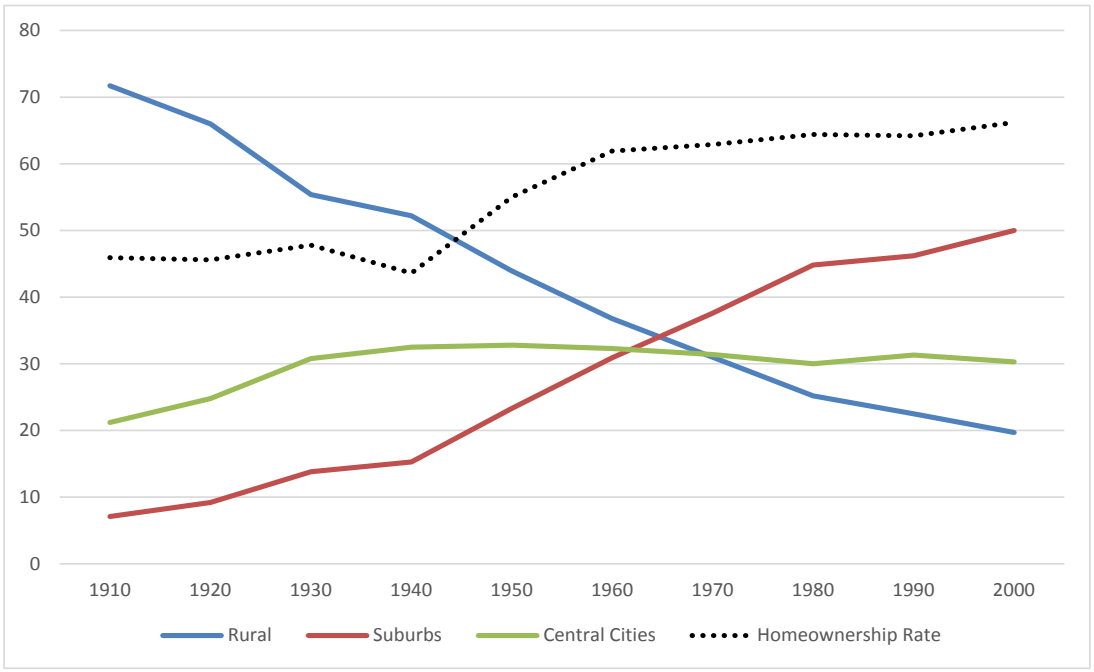
[18] Riordan, Camden Courier Post, February 2, 4B
[19] Camden Courier-Post, June 9, 1966, p17
[20] http://lwd.dol.state.nj.us/labor/lpa/census/2kpub/njsdcp3.pdf; Camden Historical Society scan****

Drawn to places like Cherry Hill by the attractiveness of low-cost federally insured mortgages, the development of new homes and new employment opportunities in outlying communities, and easy commuting along newly built federal highways, the nation suburbanized and white homebuyers moved to the periphery (Jackson 1985). After the war, Cherry Hill witnessed a tenfold increase in 30 years. During the same period, Camden lost 13% of its residents.

Figure 2 shows the share of the total population living in rural areas, central cities, and suburbs over the 20th century. The graph reveals that the pace of suburbanization increased sharply during the postwar period so that by 1970, a plurality of the population lived in suburbs.[21] The homeownership rate increased at the same time. This latter fact is important because it helps to explain the driving force behind exclusionary zoning adopted by suburban communities.

[21] Rural here refers to population outside of any metropolitan area. A suburb is an area inside of a metropolitan area, but outside of the central city. City refers to the central cities of metro areas. https://www.census.gov/prod/2002pubs/censr-4.pdf p33; https://www.census.gov/hhes/www/housing/census/historic/owner.html

Figure 2: Share of Total U.S. Population Living in Different Types of Places

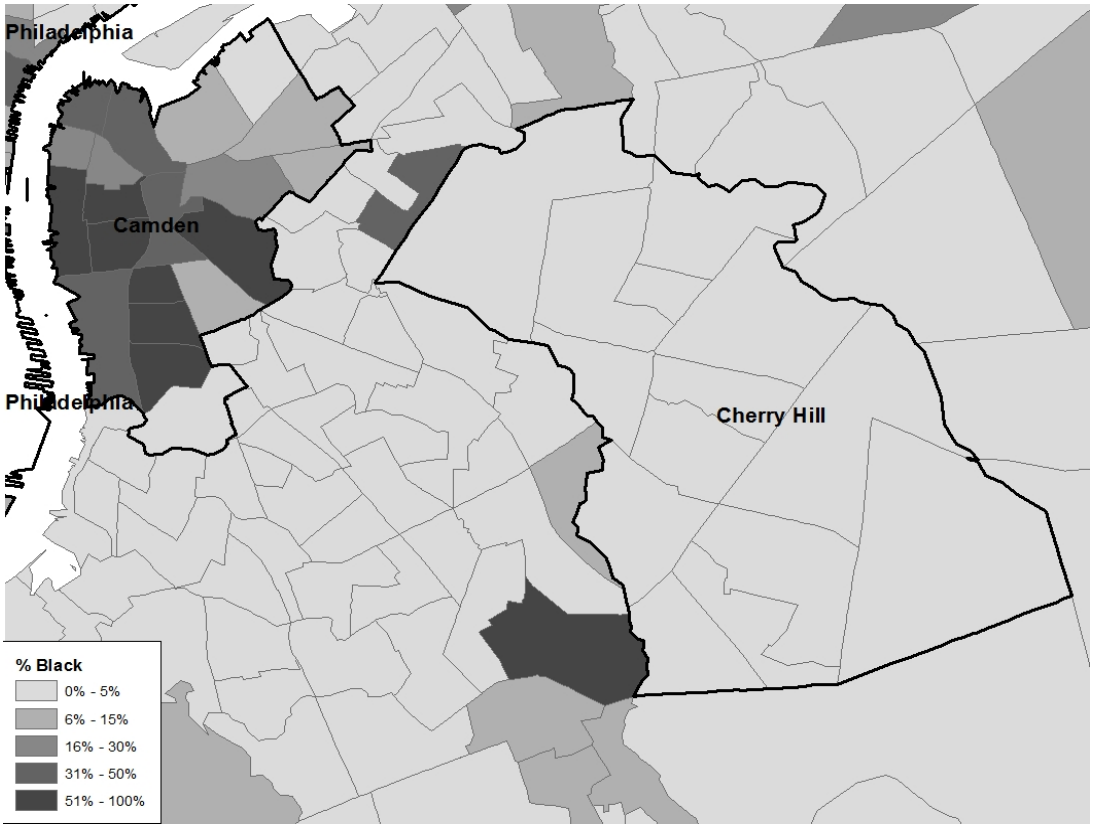


As Camden rushed to utilize more than $30 million in federal redevelopment funds to revitalize its flagging urban center, Cherry Hill was busy implementing zoning restrictions that effectively prohibited the development of low-or even moderate-income housing (Cammarota 2001). In 1975, black residents of Mount Laurel, New Jersey (a suburb close to Cherry Hill both geographically and demographically) along with several local chapters of the National Association for the Advancement of Colored People (NAACP), won a class action lawsuit challenging Cherry Hill's type of exclusionary zoning. As a direct result of this decision, Cherry Hill was required by the state to zone for thousands of low-income housing units. The city declined to do so. As of 2015, Cherry Hill continued to face litigation for its failure to zone for

affordable housing.[22] As is true in many places throughout the United States, exclusionary economic zoning cannot be disentangled from race. One activist argued "many residents carried racist feelings about affordable housing, fearing it would attract poor blacks and Hispanics."[23]

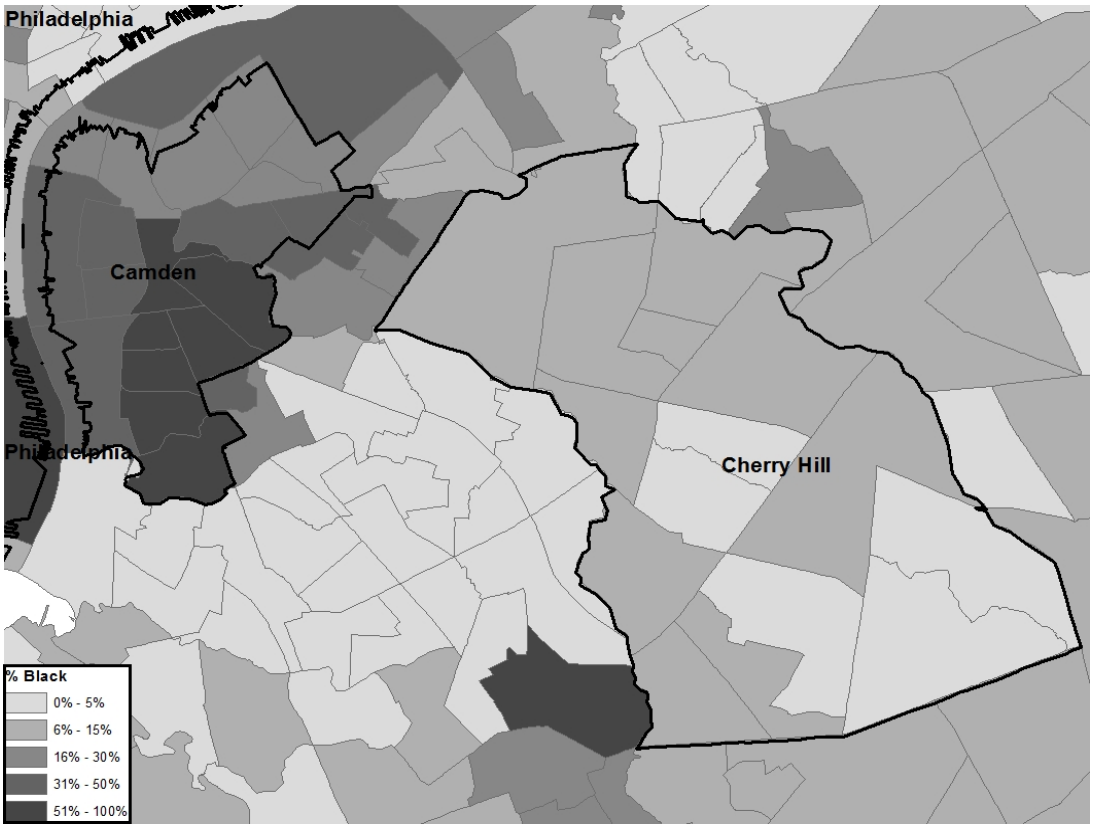
Figures 3 and 4 reveal how segregation between Camden and Cherry Hill changed between 1970 and 2010.

Figure 3: Segregation in Camden and Cherry Hill, 1970



[22] http://www.cherryhill-nj.com/DocumentCenter/View/2562, page 8;
[23] http://articles.philly.com/1989-09-10/news/26101167_1_bloat-prosperity-sewers-and-roads

Figure 4: Segregation in Camden and Cherry Hill, 2010



In 1960 Camden was 76% white; and the maps show that in 1970, although home to many more people of color than was true in 1940, Camden still had several exclusive white neighborhoods. These white neighborhoods had all completely disappeared by 2010. So, even though Cherry Hill diversified to a limited extent, a greater share of segregation occurs between these cities than within them.

Those who left Camden during the postwar period and those who moved to Cherry Hill were largely white, middle-and upper-class. As of 2014, about 39% of Camden's population owned their homes, 5% were white, and the annual median household income was $26,000. In Cherry Hill, 80% owned their homes, 75% were white, and the median household income was

$89,500.[24] In 2012, per capita taxes in Cherry Hill were double Camden's. Camden simply cannot afford to offer the services that Cherry Hill provides. The segregation along race and class lines between these two cities, and the resulting inequality in access to public goods was produced by public policy. It is a pattern that was replicated many times over throughout the United States; a postwar version of similar patterns that had developed at the turn of the 20th century.

A Theory of Segregation by Design

In the late 1800s as industrialization brought thousands of migrants and immigrants into cities, people of color and the poor were spatially isolated, not by ward or census tract, but by building and street (Logan et al 2015). What this means is that although blacks, Latinos, and Chinese residents were unlikely to live next door to white homeowners, they *were* quite likely to live down the street. By 1940, segregation shifted up to the neighborhood level (Cutler et al, Massey and Denton), so that large swaths of many cities had become predominately black or white, and both poor and wealthy residents became increasingly clustered in most places. By the onset of the Second World War, every large city in America had parts of town where people of color lived, and parts of town where the poor lived. Sometimes, but not always, these neighborhoods overlapped. Race and class segregation both increased by more than 50% between 1900 and 1940. These concentrating trends continued at a slower pace throughout the postwar period until 1970, when both race and class neighborhood segregation peaked. Neighborhood segregation by race has declined since 1970, but segregation by class has

[24] http://www.census.gov/quickfacts/table/PST045215/3410000,3400712280,00

increased.[25] During the post-war period segregation between cities increased and has remained stable since that time (Massey and Hajnal 1995, Farrell 2008, Fischer et al 2004).

Two classic economic models of individual choice appear to predict these different patterns of segregation. Thomas Schelling (1971) argued that extreme racial segregation could result from individual decisions about where to live, given even mild preferences for having neighbors of the same race. Only a small number of racially intolerant white residents can cause a neighborhood to rapidly transition because as each intolerant white resident is replaced with a black neighbor, whites with lower and lower levels of intolerance choose to leave, creating neighborhood-to-neighborhood segregation. The second individual choice model predicts city-to-city segregation. Charles Tiebout (1956) proposed that residents with similar preferences for taxation and public goods provision should sort themselves into cities with like-minded neighbors. To the extent that heterogenous preferences for tax and spending levels (or ability to pay) overlap with heterogenous demographics, they will also generate segregation.[26]

The trouble is that both theories are subject to instability in the absence of collective enforcement mechanisms (Oates 1969, Oates 1981, Fischel 1992). That is, for an individual to ensure that her neighborhood remains white and has access to a nice public park, she needs the cooperation of her neighbors. But, neighbors may have individual incentives that undermine the achievement of other residents' collective goals. For instance, it can be extremely lucrative for a white homeowner to sell her home to a black buyer. This is especially likely to be the case when black housing options are restricted and when the black population is expanding. As Hamilton

[25] The precise pattern of class segregation depends on the measures used to indicate class. Income segregation has increased significantly since the 1970s (although remains lower than racial segregation), while homeowner/renter segregation has increased by a smaller amount.

[26] Banzhaf and Walsh combine Schelling and Tiebout's insights into a single model that establishes that preferences over public goods and demographics are mutually reinforcing in the generation of segregation (2010).

(1975) explained, individual incentives can also undermine the Tiebout model. It also makes fiscal sense for a resident who prefers high quality public goods, but is unable to afford high tax rates, to locate the smallest, least expensive home in a wealthy city. The taxes this resident pays do not support the share of the public goods she utilizes, but she benefits from them nonetheless. In Hamilton's tale, this behavior could lead to wealthy residents chasing each other around to try and maintain exclusivity. In the first instance, the collective goal of maintaining the white neighborhood is undermined by sellers seeking the highest sale price. In the second instance, the provision of public goods is undermined by residents who do not pay the full cost.

Governments can promote collective action by generating enforcement of collective goals; and here it is *local* governments that play the starring role, because they alone regulate land-use. By invoking their powers of control over land-use and making choices about service provision, local governments can affect the aggregate demographic makeup of communities and the spatial distribution of residents and services, thereby generating and enforcing segregation. The goal of these policy choices is stability (or enhancement) of property values and the protection of public goods quality.

As North (1990) explains, the relative bargaining strength of different interests in any community will dictate the structure of its rules. Such rules, he tells us, are frequently devised in to promote private rather than public interests (p48). The history of local land-use planning and service provision fits squarely within this theoretical perspective. Property owners (and those who derive their livelihood from property, like realtors and lenders)[27], seek both property value appreciation and protection from losses in value. Because tax levels, service quality, and

[27] Developers, while also obviously earning their livelihood through property only sometimes have goals that are aligned with homeowners'. In some settings, developers prefer fewer regulations on development (allowing them to build smaller homes on smaller lots or denser multifamily structures, for example), but in others they are strong proponents of restrictive mechanisms like large lot zoning and racial covenants.

neighborhood demographics are capitalized in property values (see Hilber 2011 for a review), property owners invest considerable energy into dictating local policy (Fischel 2001, Stone 1989; Logan and Molotch 1978).

In the United States, property owners have always been disproportionately white; and property value has been tied to the race of occupants and neighbors (Hayward 2013, Freund 2007). Furthermore, as Bradford, Malt, and Oates (1969) argued, the quality of many public goods, like education and public safety, is predominantly affected by the characteristics of the residents themselves rather than inputs from the government. Together these circumstances have given property owners a powerful incentive to regulate who lives where since the very earliest years of urbanization. In particular, white property owners have long been concerned with excluding certain types of people from their communities.

From the earliest years of city development, white, native-born Americans had a racialized, classist understanding of property value and deservingness of public benefits. In particular, it was widely accepted that poor and minority neighbors negatively impacted property values and were less deserving of benefits than property owners and whites. Local policies like zoning and redevelopment serve these ends, and the result has been segregation along race and class lines.

The very first laws generating segregation were adopted in the first decade of the 20th century, to protect both property values and public goods exclusivity. Over the course of the next 100 years, when property owners were stymied in their attempts to create exclusivity by demographic shifts, loss of political control, or meddlesome higher levels of government seeking to promote equality, they adopted new strategies to achieve segregation, often increasing the spatial scale of exclusivity to achieve their goals. For instance, when first industrialization and

then the explosion of war time economies pulled great numbers of working class people of color to cities, many black and Latino neighborhoods swelled, threatening to spill into white, home-owner communities. City governments were called upon to use policy levers like land use regulations, zoning, the placement of thoroughfares and public housing to consolidate, and then circumscribe minority communities. When state and federal courts ordered desegregation of communal spaces like parks, golf courses, and swimming pools, local governments again used control over land use to alter the residential map. In the post-war period, big city governments became unreliable allies in this pursuit. When the federal court ordered desegregation of schools and when white owners saw threats to their political power in central cities, they ensured that suburban governments protected their interests.

The Geography of Inequality

Political geography is comprised of nested units: neighborhoods within wards, wards within cities, cities within states, and states within the nation. When residential segregation maps onto political geography, political divisions become fused with race and class divisions. This has two important consequences. First, segregation generates inequalities between race and class groups because in a world of scarce resources, the politically powerful deny public goods to those who are politically weak. Segregation within cities and suburbanization across city lines has meant that the benefits experienced by racial and ethnic minorities and low-income individuals are inferior to the benefits experienced by whites and the wealthy. Second, segregation generates political polarization between race and class groups and ultimately, inhibits cooperation.

Segregation generates inequalities because it allows political elites to target public goods toward supporters. At one time, public goods were segregated directly, through laws which

dictated that whites and blacks (and often Native Americans, Latinos, and Asians) could not attend the same schools, sit in the same area on public transportation, utilize the same parks, pools, libraries, or hospitals, be incarcerated in the same facility, or be buried in the same public cemeteries.[28] The legal segregation of public goods allowed city, county, and state governments to provide unequal funding for black and white schools, black and white hospitals, and black and white playgrounds (thereby generating unequal quality). This meant that compared to whites, blacks received inferior public goods than whites regardless of where they lived. But by the middle of the 20th century, public goods inequalities had largely come to be determined by residential segregation instead of directly. [29]

This transformation occurred in part as a response to the 1896 decision *Plessy v. Ferguson* which dictated equality in separate facilities. It was cumbersome and expensive to develop separate and equal services in diverse communities. The duplication of schools, parks, hospitals and cemeteries for black (Asian, Latino, and Native American) and white residents meant higher expenses (CQ Researcher 1947).[30] Such costs arose not only from the establishment of facilities that would not have been needed if the facilities were integrated, but also from the loss of efficiency that the replication of equipment and personnel entailed.[31] Obviously, these costs were minimized when nonwhite facilities were severely underfunded

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[28] Jim Crow laws demanded or permitted segregation in settings far beyond the reach of public goods including everything from seating in theaters and circuses, to marriage and sex, to the playing of checkers or dominos in private homes (Woodward 1955). Furthermore, laws mandating segregation were but one way in which the rights of racial and ethnic minorities were violated during this period. For instance, various laws barred minority individuals from testifying on juries against white defendants, denied them citizenship status, prohibited their access to certain professions, excluded them from owning land, and of course, prevented them from voting.

[29] The choice between segregating public goods directly and segregating public goods via residential segregation was not confined to the South. Leon Litwack (1961) writes of the antebellum north "legal and extralegal discrimination restricted Northern Negroes in virtually every phase of existence," (p64). More details on Jim Crow segregation in the north are provided in Chapter 3.

[30] http://library.cqpress.com/cqresearcher/document.php?id=cqresrre1947110700

[31] One study of St Louis's segregated school system found that 75% of the city's transportation costs in 1951-52 were spent transporting Negro school children who lived in outlying areas to colored schools in the center of the city (Russell 1954).

(Myrdal 1944, p342), but in the wake of *Plessy v. Ferguson* and successive lawsuits urging cities toward equal (albeit separate) facilities, residential segregation became an attractive alternative. After the many midcentury court decisions striking down any separate facilities (e.g. Brown v. Board of Education), residential segregation became the only remaining option (CQ Researcher 1947, Kruse 2005). In addition to being constitutional, residential segregation was also an efficient mechanism for producing inequalities across multiple public goods at once.

A similar transformation occurred in the post-war period, as neighborhood level segregation was traded for city level segregation. In 1948, when the Supreme Court ruled restrictive covenants unenforceable in *Shelley v. Kraemer*, white neighborhoods lost one of their most effective means of defense against integration. The 1968 Fair Housing Act further limited white collective action. As technological changes enhanced suburban service delivery and commute possibilities, and as the federal government subsidized homeownership outside of the central city, segregation across city lines rose. Moving outside of city boundaries allowed suburbanites to provide high levels of public goods for their residents without having to pay for services for nonresidents. For the privileged, suburbanization was an even more efficient mechanism of segregation than choosing separate neighborhoods within the city. As Hayward (2009) has argued, suburbs offered the opportunity to, "engage in exclusionary zoning practices…to opt out of supporting public housing…and even opt out of supporting public transportation within the boundaries of their municipalities," all while allowing suburbanites to, "pool their tax monies…to provide schooling and other public services." (p149). In addition to offering efficiency, suburbanization also freed residents from having to fight for control of the city government. Indeed, suburban flight was encouraged by a loss of political power in the central city.

In many ways, these inequalities in access to public goods are precisely the goal of segregation's promoters. But, a second consequence of increasing correspondence between political geography and demographic division, is an increase in political polarization. Within cities, segregation generates stark divides between racial groups, leading segregated cities to underprovide public goods. But, even beyond city borders, segregation is consequential. The process of building and defending white homeowner neighborhoods created new ideological commitments to a meritocratic discourse that depicted inequalities as being the result of the free-market, and choices made by black and poor residents, rather than the result of actions taken by government or white homeowners. The new ideology that was bred in defended white homeowner neighborhoods took root, growing into a modern conservatism that prioritized protection of property, self-reliance, and individual achievement (Self 2003, Lassiter 2006, Kruse 2005). Over the years, this conservatism has persisted, inculcating new neighbors with the same perspective.

Empirical Expectations

The preceding argument generates several broad predictions which I test in various ways throughout the coming chapters. First, I predict that some communities will be more likely to desire segregation than others: these are places that have a taste for segregation and/or have significant resources to protect. These places will be most likely to implement local policies like zoning, urban renewal, and restrictive land use regulations. When communities seeking segregation are thwarted in their ability to generate exclusivity, they'll seek to change the spatial scale of segregation – moving to exclusive neighborhoods and exclusive cities. Second, I predict that these local policies work to generate segregation along race and class lines. Third, I predict that residential segregation generates inequalities in access to public goods. Finally, I propose

that residential segregation will cause political polarization in both local and national politics. No chapter or time period contains tests of all of these predictions; but together they tell a compelling story. For more than 100 years property owners (and those who derive their livelihood from property) have urged local governments to enact policies that institutionalize segregation along race and class lines to protect their property values and control the distribution of public goods; and I show that they have been incredibly successful.

I find that segregation along both race and class lines has been promoted by white homeowners and land oriented businesses for more than 100 years. Where these interests dominated city government, segregation grew more rapidly. I also find that as segregation increased, service investment in white homeowner neighborhoods increased. As whites lost control over the distribution of benefits, they moved to the suburbs and continued to expand service delivery. Today, a greater share of public dollars is spent by suburbs than by central cities. Finally, I reveal that in more segregated places political polarization is greater and poor and minority residents have access to lower quality public goods.

Important Caveats

Schools (or lack thereof)

This is a book about segregation, and only rarely do I engage a discussion of schools. This will seem a glaring omission to many readers, especially because many pieces of my argument overlap with accounts offered by education scholars. The literature exploring inequality of educational opportunities is extremely dense and well developed (see Reardon and Owens 2014 for an overview). As Stephen Macedo writes, "Local control, when combined with local funding, and district-based assignment of pupils to schools, has created a geography marked by stark inequalities centered on class and race: a new form of separate and unequal"

(Macedo 2003, p743 in "School Reform and Equal Opportunity in America's Geography of Inequality"). The arguments that I advance here compliment and underscore much of this research. One might view this book as an extension of these arguments to the provision of *all non-school local public goods*.

My focus here is on the various policies that local governments use to generate segregation; and the consequences of segregation for local and national politics. The vast majority of the governments that I study do not play a direct role in the governance of schools or the provision of public education. That is, most cities in the United States do not spend money on educational services; and most public school students (about 85%) attend schools that are governed by school districts not municipalities. One could approach school district politics as I have done for municipalities – analyzing decisions about the drawing of catchment zones, policies on bussing, and the allocation of resources across schools in the same district. But, this would require vastly different data than what I have gathered.

That said, school enrollment and quality plays a major role in individual decisions about where to live. So while I do not analyze the politics of school districts, my argument attempts to take school dynamics into account when analyzing the impetus for segregation. For instance, I use federal desegregation orders to study how segregation changed in the post-war period.

Data Hurdles

The data that I use to reveal the patterns described above differs in important ways from previous research. Most scholars who analyze the determinants of segregation focus either on metropolitan level segregation (e.g. Dreier et al 2004, Jackson 1985) or neighborhood segregation (e.g. Massey and Denton 1993)[32]; and on racial segregation (e.g. Charles 2003) or

[32] M.J. Fischer (2008), Reardon, Yun and Eitle (2000), C.S. Fischer et al (2004), and Rhode and Strumpf (2003) are notable exceptions. However, none of these authors analyze the political causes or consequences of segregation.

class segregation (e.g. Bischoff and Reardon 2013) – but these types of sorting are intricately linked. Class segregation and racial segregation are correlated, but they are not identical. Determining both the causes and consequences of segregation requires taking these linkages into account. The data that I have collected measure segregation both within and across cities, they account for both race and class divisions, and cover city expenditures on a wide range of services during the entire 20th century. This required the encoding of archival data, the generation of new spatial data using GIS, and the compilation of thousands of digitized observations from the United States Census. The comprehensiveness of the data allows for a more complete picture of the patterns of segregation over time and allows for an analysis of the factors that give rise to this variation.

I find generally, that I am better able to explain the causes and consequences of racial segregation. In part this is because the data for measuring racial segregation are available for a longer time series and at a finer grain of detail than the data for measuring class segregation. But, the historical record is also clear that exclusion of other races has been a more powerful driver of these processes than exclusion of the poor. This is evidenced by the fact that many neighborhoods contain a mixture of homeowners and renters, as well as varied income levels, even when they are dominated by a single racial group. As a result, racial segregation has always been higher than class segregation. However, today, local policies that generate class based exclusion are generally upheld by courts, while race based exclusion is not. Additionally, income inequality has increased in recent decades. As a result, class segregation has risen and will likely continue to rise, even while racial segregation declines.

Throughout my empirical analyses I face profound causal challenges. In some cases my analysis is plagued by reverse causality: do white residents move to the suburbs because the

central city elected a black mayor, or did the moving of white residents make it possible for a black mayor to get elected? In other cases, my analysis suffers from an inability to disentangle selection from treatment: does living in a homogenous white neighborhood make people more conservative or do people with conservative views move to homogenous neighborhoods? In still other cases, my argument would be aided by evidence of strategy on the part of local elites, but none exists: zoning generates greater segregation, but could this have been an unintended consequence?

In each chapter I describe the hurdles presented by the (lack of) data and my strategies for overcoming them. Generally, I seek to build a case for my argument using both detailed qualitative evidence and quantitative evidence from hundreds or even thousands of places. I often draw on the timing of events for evidence of causality and, where I am able I utilize instrumental variables to underscore my findings.

Contributions to Existing Literature

This book contributes to a number of dense literatures including work focused on segregation, public goods, attitudes toward outgroups, and political inequality. Although a great deal has been written on each of these topics, very little research engages more than one of these areas. For instance, Tiebout's (1956) seminal article arguing that consumer-voters pick communities which best satisfy their preferences for public goods ignores the role of race, segregation, and inequality in these choices and is silent about the ways in which public goods packages are developed. Other scholars (Alesina et al 1998) show that diversity drives down collective investment in public goods, but do not consider the ways that geo-spatial arrangements might affect this relationship. Still others have shown that whites' desire for homogeneity has played a role in generating racial segregation between cities and school districts (Reber 2005,

Baum-Snow and Lutz 2011, Boustan 2010). However, these works largely ignore the political mechanisms by which such preferences are realized (e.g. the development of zoning policies).[33]

Outside of (excellent) case studies focused on one to two metropolitan areas at a time (Danielson 1976, Hirsch 1983, Sugrue 1996, Kruse 2005, Lassiter 2006, Kraus 2000), to date most of the research analyzing the relationship between segregation and public policy has focused on national level programs like the Federal Housing Administration underwriting guidelines (Jackson 1985) or the Home Owners Loan Corporation neighborhood investment ratings (Hillier 2005).[34] With such far reaching effects, the focus on these programs has been well placed, but has tended to obscure considerable subnational variation; and while the case studies offer invaluable historical detail, they are unable to provide evidence of broader patterns of the effect of local policies on segregation. In short, while scholars have documented changing patterns in racial and class segregation, they have not demonstrated the ongoing role of city politics and local service policy in creating segregation and growing inequality. I show how patterns of local service delivery, zoning laws, and other local policies not only mirrored patterns of segregation but also very much drove them – not only in the pre-civil rights era, but also in recent decades.

Although many scholars have suggested that segregation across neighborhoods or between cities and suburbs fosters inequalities in access to public goods (Massey and Denton

[33] Baum-Snow and Lutz analyze the effect of school district desegregation orders on suburbanization. So, while they focus on the effect of a public policy, they are not concerned with policies that intentionally aided segregationist preferences.

[34] Important exceptions include Rothwell (2011) who analyzes the effect of low density zoning on metropolitan area racial segregation and Dreier et al (2004) who suggest (although they do not provide direct evidence) that zoning and redevelopment affect economic segregation across cities. Cutler, Glaeser, and Vigdor (1999) find support for a theory of "collective action racism" prior to 1970. They show that housing prices for equivalent quality housing were higher for blacks than for whites implying that whites acted collectively to limit black housing choices. However, the authors do not provide any analysis of the types of collective action in which whites engaged beyond speculating that restrictive covenants and racial zoning may have played a role. Importantly, Cutler et al do not distinguish between collective actions that occur in the public versus private realm.

1993, Burns 1994, Dreier et al 2004), very little research offers systematic evidence of this intuition.[35] Other scholars have carefully documented the pernicious effects of segregation on individual level outcomes (Ananat 2011, Cutler and Glaeser 1997), but have not offered a direct link between these outcomes and allocation of public goods. I offer quantitative and qualitative data showing that segregation across both neighborhoods and cities allows governments to disinvest in poor and minority communities and this produces unequal access to public goods. These results help to explain why social mobility is tied to place, as scholars like Sharkey (2013) and Sampson (2012) find, and demonstrate the consequences of public policy and segregation for larger patterns of inequality.

Much of the work investigating the determinants of segregation (both within cities across neighborhoods, and within regions across cities and suburbs) argues or assumes that the important driver of racial segregation is prejudice – that is, attitudinal predispositions toward racial and ethnic minority groups. This is an insufficient account. It is insufficient first because racial segregation has not declined as precipitously as one would predict given dramatic changes in overt expressions of racism. I argue that the institutionalization of prejudice through local public policy makes segregation more rigid. Second, pure prejudice does little to explain the rise of class segregation. I argue that if we understand segregation as a mechanism to protect public goods and property values, increasing class segregation is predictable. Finally, a pure prejudice account leaves unexplored the basis for these predispositions. I argue that beliefs about the acceptability of different demographic groups as neighbors (e.g. what we might take to be pure

[35] An important exception is Troesken (2001) who provides direct evidence of the relationship between segregation and public goods inequalities. He shows that cities with racial segregation were more likely to generate unequal access to municipal water and sewer connections in the late 19th and early 20th centuries.

prejudice) were influenced by the distributions of public goods and battles over those distributions decades ago.

Contrary to some scholars' conclusion that the core problems of segregation have been alleviated, I show that segregation persists, that segregation has grown across cities, and that government policies continue to play a central role in perpetuating segregation.[36] White, wealthy Americans are still trying to segregate themselves. And local governments still tend to invest more toward whites and the wealthy. I build this argument through seven substantive chapters and a conclusion that considers omissions from the book and forecasts the path forward.

Chapter Summaries

In order to orient the study, in Chapter 1, I provide descriptive information regarding changes in segregation and public goods spending over the course of the 20th century. I offer an overview of patterns that will be linked through the chapters that follow. I begin by providing a broad overview of spending between 1900 and 1940. It reveals that cities increased expenditures on street paving and lighting, refuse collection, sewers, libraries, health, education, public safety, and recreation, and increased revenue from taxes. During this early period, cities became modern service providers.

Next, I explore early patterns of race and class segregation. I show that racial segregation increased dramatically between 1890 and 1940 while class segregation increased marginally. It was in the cities with the largest budgets that segregation increased the most. Then, I turn to analyzing fiscal and segregation patterns between 1970 and 2011. I argue that during this period, white property owners turned to suburbanization as their primary mechanism for protecting

[36] Several recent headlines make this claim "Glimpses of a Ghetto-Free Future," "Segregation Continues to Decline in Most U.S. Cities, Census Figures Show," "The End of the Segregated Century: Racial Separation in America's Neighborhoods, 1890-2010."

property values. After 1970 the dominant trend in both race and class segregation was increasing differentiation between cities. During this period, suburban governments grew more intensely than central cities so that by 2011, central cities accounted for a smaller share of total metro area spending than they had in 1970.

In Chapter 2, I provide the first piece of evidence directly linking the patterns described in Chapter 1 by showing that public goods considerations drove efforts to segregate in the early decades of the 20th century. Acting in response to white homeowners and land-oriented businesses, local government policy explicitly sought to exclude people of color from white neighborhoods and poor individuals from wealthy neighborhoods. In empirical analyses I analyze the factors that encouraged the adoption of zoning laws and the role that zoning laws played in the development of race and class segregation. I find that exclusion was most adamantly pursued in cities that had become significant providers of public goods, where property taxes were high (and so, raising property values was attractive), and where political support for Progressive reform was strongest. I supplement this analysis with qualitative evidence that reveals the many factors local governments utilized to promote segregation, including strategies like the siting of segregated public goods such as parks and schools. Finally, this chapter reveals that zoning laws had their intended effect: early zoning adopters segregated more rapidly over the next several decades compared to cities without similar ordinances and zoned cities witnessed greater inequalities in housing values.

Chapter 3 documents the unequal provision of public goods that early segregation allowed. Using historical case study evidence, I show that poor and minority neighborhoods consistently received worse public amenities like road paving, and health clinics. I draw on detailed ward level data from Baltimore, Boston, Chicago, and Philadelphia to show that sewer

extensions were less likely to be built in neighborhoods with higher proportions of African American and renting residents. As a result, inequality in water and sewer access was greater in more segregated places. I show that these inequalities persisted. Using data on all tracts in all cities in the United States, I provide evidence that whites and minorities, and renters and homeowners had differential rates of access to public sewers in more segregated places in 1970, 1980, and 1990. I argue that these inequalities in service provision affected the ways in which white and wealthy residents would come to view poor and minority neighbors. Daria Roithmayr (2014) points out, "we see the strongest evidence of continuing discrimination in housing markets" (p18). This is because the roots of this bias are whites' conscious and subconscious beliefs about the effect of nonwhite and renter neighbors on property values and the quality of public goods – beliefs that were fostered by government choices at the turn of the 20th century.

Chapter 4 provides evidence of municipal policy effects on segregation in the middle of the 20th Century. By 1940, segregation was entrenched, as were the unequal allocations of public goods. But patterns would change in the post war period. In some places segregation along racial lines increased, while in others it had already begun to decline (as it would everywhere after 1970). Class segregation began a slow ascent and then leveled off. As was the case in the first time period analyzed, local public policy played a role in these patterns. I provide evidence that cities that more vigorously implemented urban renewal programs grew more segregated along both race and class lines. I also show that during the 1960s and 70s, in many cities white homeowners lost the political power needed to police the borders of their neighborhoods and control the distribution of public goods. I argue that such changes made suburban living a more attractive option than living in homogenous neighborhoods within cities.

Between 1970 and 2000, the major change in segregation patterns occurred between cities. That is, neighborhoods became more racially integrated within cities, but whole cities became more racially homogenous. Class segregation across cities also increased during this period. Chapter 5 offers an analysis of the role of local political control in generating these changes. Using demographic and finance data from all metropolitan areas in the United States between 1980 and 2000, I show that larger budgets, higher spending on policing, and minority mayoral victories are associated with more segregation across city lines. Where whites maintained control they were less likely to move to the suburbs. Throughout the postwar period cities and suburbs alike moved away from explicitly racial strategies toward class based tactics, such as large lot zoning and limiting multi-family developments, to ensure segregation. I show that more restrictive zoning by suburban cities increased both race and class segregation. As a result, suburban communities made decisions that profoundly affected non-suburban residents while preventing them from participating in the decision making process. In this context, representative government, policy responsiveness, and political equality became hollow concepts.

In Chapters 6 and 7, I focus on the consequences of segregation for modern politics. In Chapter 6, I analyze the consequences of segregation within cities. Quite ironically given early claims that segregation was the best solution to racial discord, I show that segregation is associated with deep race and class divisions that dominate city politics today. Polarization makes cooperation difficult and, I show that segregated cities have smaller city budgets and spend less on individual categories of expenditure such as roads, policing, parks, and sewers. Underinvestment means that city services do not operate well. Focusing on one measurable area

of public goods provision, I demonstrate that sewer overflows are more frequent in segregated cities.

In Chapter 7, I focus on the effects of segregation for national level politics. I draw on case study and large-n evidence to show that the integration of public spaces and residential areas encouraged whites and the wealthy to move to the suburbs during the postwar period, which allowed for more control over political decisions and the distribution of public goods. Then, I draw on restricted-access General Social Survey data geo-coded to 1970 Census tracts to show that residents who live in neighborhoods that were whiter than the metropolitan area as a whole in 1970 are much more conservative than those who live in more integrated places. I argue that this conservatism is rooted in the battles over integration that occurred in earlier decades.

In the conclusion of the book, I pull the many pieces of evidence presented previously into a single framework and discuss what the future holds. I reiterate my main claim: local governments pursue segregation at the behest of politically powerful interests. This allows politicians to target public goods towards some residents and away from others, resulting in differential access to public goods. Segregation generates unequal political outcomes which in turn, reinforces segregation. By linking neighborhood level segregation to suburbanization, I suggest that preferences for separation have changed in form, but not intent over time. Going forward we can expect additional change. Rather than seeking residential segregation, some individuals will choose to leave the public realm altogether – relying more heavily on private provision of services like education, policing, and park space. We have some evidence that privatization has increased even as many cities have become more integrated. The drive to protect property values, ensure good schools for children, and safe streets for families has

remained a powerful force. In the final section of this concluding chapter I consider some potential policy solutions to these seemingly intractable problems. I suggest that the most promising path forward is to utilize lessons from school finance reform (e.g. Lafortune, Rothstein, and Schanzenbach 2015) to guide state governments' approach to producing more equal access to a range of local public goods.

Chapter 1: Segregation and Public Goods over the 20th century

At the turn of the 20th Century, cities in the United States experienced intense demographic change. The first waves of African American migrants left the South for Northern communities, and immigrants from Europe streamed across the borders until the onset of World War I and the implementation of restrictive immigration laws. By the middle of the Century, the spatial distribution of residents was markedly different than it had been 50 years prior; and patterns would change again over the ensuing 50 years. Until the onset of the Great Depression, expenditures by local governments also grew rapidly. It was during this period that the foundation for modern urban politics was laid across the nation. This growth in municipal spending continued unabated for the next 100 years, but it was uneven, favoring suburbs at the expense of cities. This chapter charts and links changes in both demographics and service provision in metropolitan America.

I begin with a presentation of data on the growth of expenditures during the first four decades of the 20th century. I analyze demographic correlates of this growth, showing that homeownership, wealth, diversity, and density were all associated with expanding municipal governments. This, I argue, explains why white homeowners and land-oriented businesses pursued residential segregation: to protect property values and capture public goods. Next, I present the changing patterns of race and class segregation for these early decades. I show that cities with greater spending became more segregated. I then turn to an analysis of spending and segregation between 1970 and 2010, concentrating on the effects of suburbanization. I provide evidence showing that the level at which segregation occurred shifted during this time. While neighborhoods within cities became less segregated, cities started to look increasingly different

from one another. As the next several chapters will reveal, the changing level of segregation has had significant implications for the allocation of resources.

The Rise of Urban America

In the year 1800, only 5% of the population of the United States lived in cities and approximately 90% of the workforce was tied to agriculture. For the next half century, this figure inched modestly upwards, so that by 1850, 15% of population lived in urban areas.[37] After the end of the Civil War, the pace of urbanization (and industrialization) increased dramatically. By 1900, the nation was 40% urban and in 1920, the Census reported a majority urban nation for the first time. This trend continued; today the nation is approximately 80% urban.

As industrialization advanced, massive demographic shifts accompanied the economic changes. Cities began to fill with migrants and immigrants seeking work in the new factories and service sectors. During this period, most workers commuted to their jobs by foot, limiting the distance residential neighborhoods could be located from places of employment. The result was massive overcrowding – in some cities as early as the first decades of the 1800s. Housing and sanitary capacities became overextended; epidemics and conflagrations were rampant. O'Connor (1984) offers a vivid description of early 19th century Boston:

> Within the heart of the old city…things had deteriorated badly over the years…Its meandering streets…were hedged in by four and five-story houses that blocked out the sunlight. Pedestrians were in constant danger of being knocked down by stagecoaches, or bowled over by droves of pigs being hustled to market….[An] abominable stench rose above it all. Not merely the oily fish smells from the docks, the briny tang of salt water, or the sickish odor of the mudflats at low tide. This was the repulsive reek of

[37] The Census determines whether a particular geographical area is urban based on population size and density. Rural territory is any area that is not urban. Starting in 1900, the Census has defined urban areas as all places with at least 2,500 residents. From 1910-1950, urban areas only included incorporated places (e.g. cities) that met the size threshold. In more recent decades, the determination has been a combination of size and density; urban areas contain at least 2,500 people have a density threshold of at least 1,000 people per square mile.

> uncontrolled street refuse and untended garbage. To make matters worse, the city's sewerage system emptied out into the Town Dock… (p80).

Despite the clear benefits of moving away from the center of town, the nature of transportation and the needs of industry meant that even while they grew larger and more diverse, cities in the 1800s experienced low levels of segregation along race and class lines. At this time, the population of urban blacks was heavily concentrated in Southern cities. My dataset includes demographics for 296 cities from the 1900 Census of Population and Housing. These cities housed about 1.2 million black residents; approximately 64% of whom lived in the South. In an early analysis of *The Negro Ghetto* (1948) Robert Weaver explained, "in the cities of the Old South, like Charleston and New Orleans…most of the dwellings occupied by Negroes were either servants' quarters in the rear of the better houses or shacks on streets where low-income groups of whites also lived," (p8). In the north, Weaver says blacks "usually lived in clusters in racially mixed neighborhoods," (p9-10). However, detailed research on New York and Chicago by Logan et al (2015) reveals that although northern blacks did not live in "*predominately* black neighborhoods", they did live in "*disproportionately* black…neighborhoods," (p1062). What this means, is that while neighborhoods were mixed in the aggregate (thereby generating low measures of segregation), the housing available to blacks and other racial minorities in urban areas, was nonetheless heavily restricted from the start. Yet, because political representation is frequently defined at the neighborhood level, with low levels of neighborhood segregation, blacks and other minorities were likely to benefit from public goods provided to white homeowners.

Until about 1930, "state and local governments were *the* governments of most Americans" (McDonald and Ward 1984, p14). This was especially true with respect to fiscal

affairs. To the extent that *any* government would have addressed the negative externalities associated with rapid urbanization, it would have been viewed as the responsibility of the city (and their parent states). Yet, throughout the first half of the 19th century, city governments were fairly limited in scope. The economies of early cities were largely commercial, and a dedication to privatism and the market generally dictated political affairs (Monkkonen 1988, Warner 1968, McDonald 1986). A large and meddlesome government was something to be suspicious of and few cities provided extensive public services. Government was run by (and services were often partially funded by) the wealthy – typically merchants. As Bridges (1984) explains of New York City in 1830s, "it is impossible to determine where government began and noblesse oblige (and the church) ended" (p72).

In most instances, services were handled by volunteers (e.g. fire brigades) or part-time, municipally funded workers (e.g. night watchmen); and while city budgets provided contributions toward these services, city responsibilities were largely focused on regulating access to urban activities (like city markets). But by the end of the 19th century, city governments began to adopt a new orientation toward public goods provision and city leadership began to shift away from wealthy merchants and toward career politicians. As a result, services came to be increasingly funded by city budgets, not charitable contributions. Monkkonen (1988) argues that city goals had been broadened by the 1890s to include:

> Protecting private property (firefighting); suppressing crime; controlling behavior in public areas; building and maintaining streets and sewerage systems; aiding the poor, schooling children and sometimes adults; funding public libraries; providing recreation and entertainment; supporting a minimal level of health; temporarily assisting all persons incapable of caring for themselves…; enforcing public morality; expending direct financial aid to private capital…; and constructing not-for-profit public buildings in which to house these activities (p218).

Historians do not agree on what caused the transition from the regulatory approach of antebellum governments to what Monkkonen calls the "service city" by the late 1800s. Yet, with one exception (Brown and Halaby 1984), scholars have not analyzed this development quantitatively in more than a handful of cities. Simply put, we lack systematic, quantitative knowledge of the factors that affected the development and expansion of city government at the turn of the 20th century when significant variation was present. In 1902, for example, the median per capita expenditure of local governments in cities over the size of 25,000 (n=160) was about $11, but the standard deviation was more than a third of that amount ($4). Some cities spent very little providing services for residents, others, a great deal. If city governments were once limited and weak, why did some choose to begin providing services for residents while others lagged behind?

The dominant paradigm is to understand the growth of city government as the necessary response to the negative externalities of increased population growth and density such as pollution, congestion, conflagration, crime, and disease (see for example Griffith 1927, Still 1948, Glaab and Brown 1967, Chudacoff 1975, Anderson 1977, Troesken 2004). Scholars have generally recognized that the capacity to fund such developments through taxation and debt varied widely across cities (Dilworth 2005, Cutler and Miller 2006, Monkkonen 1988).[38]

Some scholars argue that managing racial and ethnic diversity in growing, compact cities was an essential driver of the development of municipal government. In an analysis of city relief spending in 1929, Cybelle Fox (2012) argues that native-born Americans and social welfare workers sought to Americanize foreign-born populations by drawing them into the reach of government. Tebeau (2003) shows that the development and expansion of fire services was an

[38] Research indicates that prior to the advent of the municipal bond market, cities were largely unable to invest in large infrastructural development.

attempt to confiscate power from ethnic fire brigades, ensuring that firemen would be loyal to the city and not to their group. Similarly, Monkkonen (1988) argues that spending was a mechanism to manage conflict. As cities grew, he says, the bureaucracy of municipal government was invoked to manage conflict and Americanize newcomers as a substitute for small town interactions. In support of this thesis, Brown and Halaby (1984) find a substantial, positive relationship between expenditures and percent foreign born. But contrary to these arguments, Goldin and Katz (2008) show that community *homogeneity* was key in the expansion of free public schooling. A large literature linking diversity and limited public goods provision underscores this finding (Alesina et al. 1999, Poterba 1997, Vigdor 2004, Hopkins 2009, Habyarimana et al. 2007, 2009, Miguel and Gugerty 2005, Miguel 2004, Algan et al. 2011, Fearon and Laitin 1996). This leaves no clear prediction regarding the direction of the relationship between diversity and spending.

Several accounts emphasize demands made by emerging middle-class residents (Yearly 1970), as views regarding what it was the duty of government to provide evolved (Myrdal 1944). McDonald (1986) suggests that property owners in particular wanted good public services which led to high spending through debt. Others highlight the demands of newly minted professionals engaged in the private provision of services, who would benefit from public funding. Teachers pushed for public education; fire fighters pushed for fire forces (Katznelson and Weir 1985, Tebeau 2003). Along these same lines, Monkennen (1988) highlights the growing role of planners, real estate developers, and professional bureaucrats who helped to build the Progressive reform movement (see also Hays 1964, Bridges 1997, Tretter 2012 on Progressivism and growth).

City Spending Data

To provide a description of historical expenditure patterns, I use a new dataset built from a number of government sources that includes data from the turn of the century to the Second World War. Starting from 1902, the Bureau of the Census has been responsible for collecting data on the finances of local governments. With a few exceptions, the data have been collected annually for cities that meet a particular population threshold (which has varied over time). The Federal Reserve Archive (http://fraser.stlouisfed.org/) has digitized copies of the paper Census reports up until the year 1941, and I encoded a series of relevant variables from these digital reports at five year intervals.[39] Thus, I have fiscal data from 1902, 1907, 1912, 1917, 1923,[40] 1927, 1932, and 1937, as well as other governmental data from a number of early special Census reports.[41] I encoded socioeconomic data from the Census of Population and Housing in 1900, 1910, 1920, 1930, and 1940. In order to be able to analyze the diversity of the population, I gathered data on the country of origin for all of the foreign born residents in each city. Details on the coding of foreign born groups are included in the appendix. Linear interpolation was used to create intercensal estimates for all of the socioeconomic variables. In my largest sample, I have a total of 1,397 city-year observations, which includes data from 262 cities.

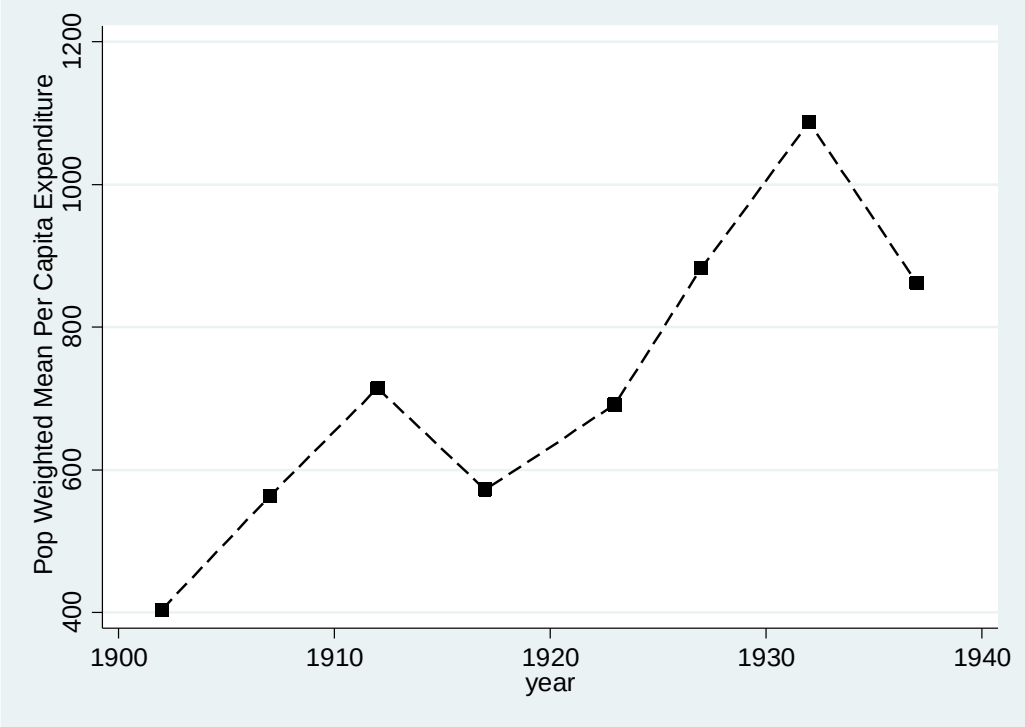
[39] The five year interval was selected to match the interval that the Census of Government used starting in 1952. From 1902-1903, the report was entitled "Statistics of Cities Having a Population of over 25,000." From 1904-1908, it was entitled "Statistics of Cities Having a Population of over 30,000." From 1909-1931, it was entitled "Financial Statistics of Cities Having a Population of over 30,000." From 1932-1941, it was entitled "Financial Statistics of Cities Having a Population of over 100,000." Collection of data on local governments was spotty between 1942 and 1952. The Census resumed regular collection of data at five year intervals starting in 1952.

[40] The report produced in 1922 was limited to very basic data and lacked many of the variables of interest. The 1923 report was used instead.

[41] These include the General Statistics of Cities: 1909: Including Statistics of Sewers and Sewage Disposal, Refuse Collection and Disposal, Street Cleaning, Dust Prevention, Highways, and the General Highway Service of Cities Having a Population of Over 30,000; Municipal Electric Fire-Alarm and Police-Patrol Signaling Systems: 1912; General Statistics of Cities: 1915: Including Statistics of Governmental Organizations, Police Departments, Liquor Traffic, and Municipally Owned Water Supply Systems, in Cities Having a Population of Over 30,000; General Statistics of Cities: 1916: Including Statistics of Parks, Playgrounds, Museums and Art Galleries, Zoological Collections, Music and Entertainments, Swimming Pools and Bathing Beaches, and Other Features of the Recreation Service.

I begin with an analysis of total *Per Capita City Expenditure* as the dependent variable.[42] All data are shown in real (2012) dollars to make comparison to the modern period more straightforward. As Figure 1.1 shows, development of municipal budgets was rapid over this time period. The graph displays the population-weighted mean of per capita total expenditure, plotted against time for all cities that had more than 30,000 residents in 1902. Tables 1.1 and 1.2 show inflation adjusted (but unweighted) mean per capita spending and revenue on various categories over the same time period.

Figure 1.1: Municipal Expenditures Per Capita
In 2012 dollars



[42] This measure includes all general expenses, expenditures on interest, and outlays for the municipal corporation.

Table 1.1: Municipal Budgets in the Early 20th Century
Per capita expenditures in 2012 dollars

year	Expenditure	General Expenditure	Outlays	Revenue	Taxes	Subventions
1902	$313.0		$ 114.2	$425.5	$269.3	$20.6
1907	$409.7	$279.2	$174.0	$418.6	$285.6	$24.4
1912	$562.0	$323.0	$207.9	$541.7	$364.9	$27.3
1917	$456.7	$274.7	$168.0	$408.8	$314.6	$22.1
1923	$587.0	$393.9	$205.2	$491.5	$431.2	$29.2
1927	$700.7	$460.9	$247.3	$586.7	$521.9	$32.2
1932	$868.7	$700.3	$173.3	$807.4	$710.8	$65.0
1937	$670.9	$682.2	$115.5	$704.0	$643.9	$126.9

Table 1.2: Municipal Spending in the Early 20th Century
Per capita expenditures in 2012 dollars

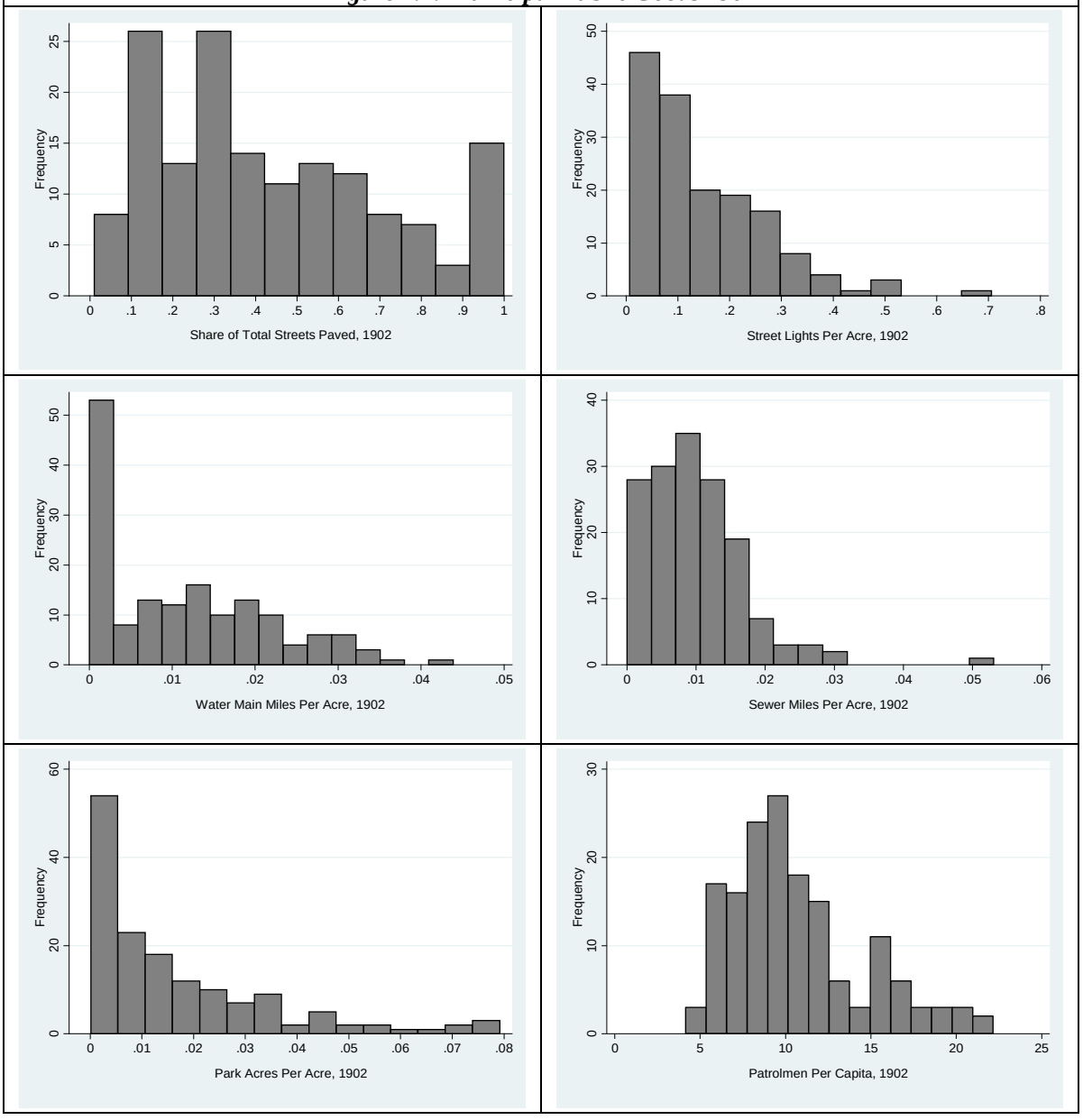
Year	Inspections	Refuse Collection	Sewers	Libraries	Police	Fire	Health	Highways	Recreation	Schools
1902	$1.3	$4.6	$3.7	$3.0	$28.9	$31.1	$4.8	$43.2	$6.5	$84.4
1907	$1.4	$6.7	$4.6	$4.4	$31.4	$35.4	$4.6	$38.7	$7.3	$96.0
1912	$2.2	$19.6	$5.0	$5.1	$33.3	$37.9	$6.2	$42.2	$10.1	$107.7
1917	$1.9	$16.1	$3.8	$4.0	$27.0	$29.2	$6.3	$32.6	$8.9	$97.5
1923	$2.4	$11.9	$5.1	$5.6	$36.1	$39.8	$9.0	$39.0	$11.9	$161.8
1927	$3.0	$14.1	$5.9	$6.7	$43.6	$45.2	$11.2	$43.4	$13.1	$202.3
1932	$3.9	$18.7	$7.7	$10.7	$63.2	$57.2	$17.7	$51.6	$22.3	$257.5
1937	$3.4	$16.1	$7.9	$10.7	$60.3	$53.5	$11.5	$43.4	$21.2	$233.0

The figure and tables reveal that during this period, city expenditures grew across the board. In every category, from sanitation to safety, from health to highways, American cities became modern service providers. Spending slid back during the time of the First World War and the Great Depression, but otherwise followed a steep upward trajectory. Over the next 70 years, growth continued. In 2012, per capita spending was literally 10 times what it had been in 1902. Yet, even at the start of the period, growth was uneven.

Figure 1.2 shows histograms of a number of different public goods that were provided by cities in 1902, including the share of total street miles that were paved, the number of street lights per acre, water main miles per acre, sewer miles per acre, park acres per acre, and

patrolmen per capita. All of the distributions are widely spread. Clearly, significant variation existed.

Figure 1.2: Municipal Public Goods 1902



To analyze the correlates of expenditure, I regress the natural log of inflation adjusted *Expenditures Per Capita* on several variables intended to capture explanations offered in the historical literature. Many scholars have argued that cities responded to pressing needs as they arose. For instance, Glaab and Brown (1967) argue that industrialization and population growth generated demands that were fulfilled by city government. While my dependent variable is measured as per capita spending, it is still possible that large and/or dense cities may have required higher levels of spending (if, for example, fires or diseases were more likely to spread in such places). Monkkonen (1988) argues that the need for social control through bureaucratization was greatest in large cities. Alternatively, large cities may have benefitted from returns to scale, and therefore may have been able to provide services for a lower cost. To test for these possibilities, I include a measure of the *Total Population* (logged) and *Density* (total population divided by total acres).

The analyses also include two different measures of diversity. The first is the share of all residents that were classified as *Nonwhite* by the Census of Population and Housing. During this period, racial categorization was in flux (Roediger 2005) and the determination of race was made by Census takers (Nobles 2000). However, generally speaking, the *Nonwhite* category included Blacks, Asians and Asian Americans, Native Americans, and sometimes Mexican/Latin Americans. Persons of mixed race were typically identified as nonwhite.

The second measure of diversity is a Herfindahl Index:

$$Diversity = 1 - \sum_{f=1}^{F} \pi_f^2$$

where, π_f is the population share of the foreign-born group *f* and F is the total number of foreign-born groups. There were 52 different foreign-born groups recorded by the Census during this

period (listed in the appendix), and the resulting diversity index ranges from a low of 0.23 to 0.94, with a mean of 0.84.[43] This illustrates that the foreign-born population in the United States was extremely diverse.

As explained above, property owners were among the most supportive of investing in new services (McDonald 1986). However, scholars also report a general tendency among the populace to rail against high taxes and profligate spending of city governments in the late 19th and early 20th centuries (Bridges 1984). According to Monkkonen (1988), this belief was particularly pronounced among property owners. To investigate the role of support for spending among owners, I include the proportion of housing units occupied by *Home Owners*. To measure the wealth of the community I include the *Assessed Value* of all property in the city. McDonald (1986) provides compelling evidence that this measure accurately captures the level of economic development in the city – which should correlate positively with ability to fund city services.[44] Finally, to capture the argument that the development of city services was driven by the emerging professional class (including land developers and planners), I add the share of adults employed as *Professionals*.[45] Because I have missing data on a number of variables, I begin with a presentation of the results using only density and population as independent variables. I then add the remaining variables iteratively. Summary statistics for all variables are in appendix Table A1.1.

[43] Making these categories comparable across censuses required some recoding. For instance, in 1930 and 1940, Irish immigrants were separated by Northern and Southern Ireland. I combined these categories to make the data comparable to the 1900, 1910, and 1920 censuses, which included only one category for Ireland.
[44] However, McDonald (1986) finds that when assessed value rose in San Francisco, politicians tended to lower tax rates, perhaps resulting in little difference in expenditure.
[45] The other occupational categories coded by the Census during this period were trade, manufacturing, domestic work, and agriculture. In 1900, the category professionals included actors, architects, artists, clergymen, dentists, electricians, engineers and surveyors, journalists, lawyers, literary and scientific persons, musicians, government officials, physicians, teachers, and other professionals.

These variables are admittedly insufficient to capture all of the important differences across cities during this period. So, rather than attempt to explain variation across cities, I pursue a more modest goal – to describe variation within cities over time. To do so requires that I use a city fixed effects model for the analysis. This strategy overwhelms much of the variation present in the data, but it allows for a more precise estimate of the effect of each of these contextual variables on spending. Table 1.3 presents the results.

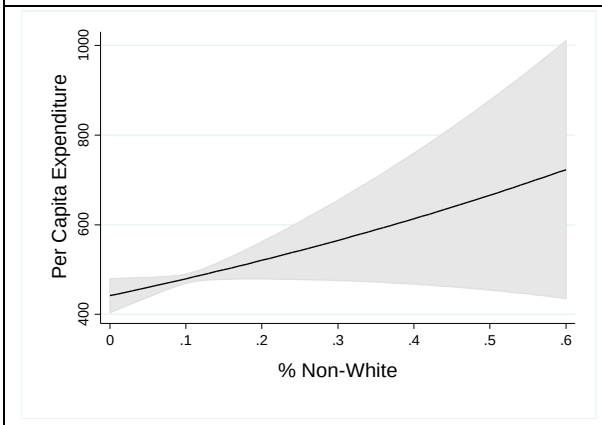
Table 1.3: Factors Affecting City Wide Expenditure

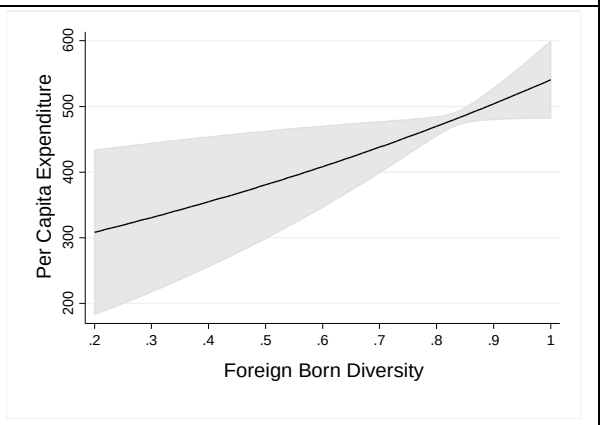
	Logged Per Capita Expenditure								
	β	Std. Err	P>|t|	β	Std. Err	P>|t|	β	Std. Err	P>|t|
Population (log)	0.520	0.037	0.000	0.329	0.047	0.000	0.263	0.051	0.000
Density	0.016	0.004	0.000	0.013	0.004	0.001	0.01	0.004	0.011
% Nonwhite				0.838	0.412	0.042	0.821	0.409	0.045
Foreign Born Diversity				0.893	0.322	0.006	0.702	0.326	0.031
Assessed Value ($100 mill)				0.005	0.003	0.104	0.005	0.003	0.138
% Home Owners				2.672	0.385	0.000	2.030	0.423	0.000
% Professionals							3.197	0.934	0.001
Constant	0.045	0.421	0.961	0.332	0.481	0.49	1.275	0.559	0.023
N	1,397			1051			1040		
Number of Cities	262			173			169		
R^2 within	0.175			0.301			0.315		
R^2 between	0.064			0.077			0.112		
ρ	0.681			0.606			0.567		

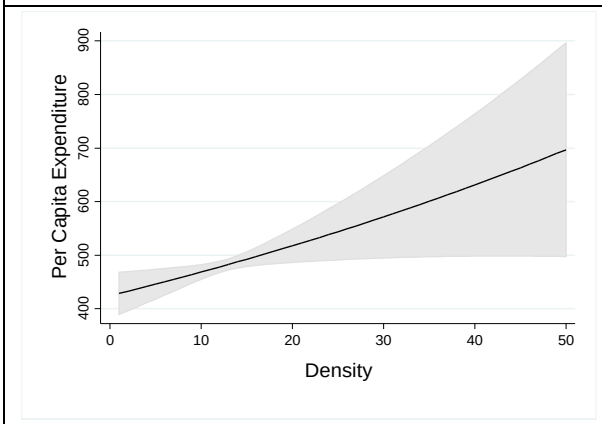
Note: Fixed effect for cities included, but not presented

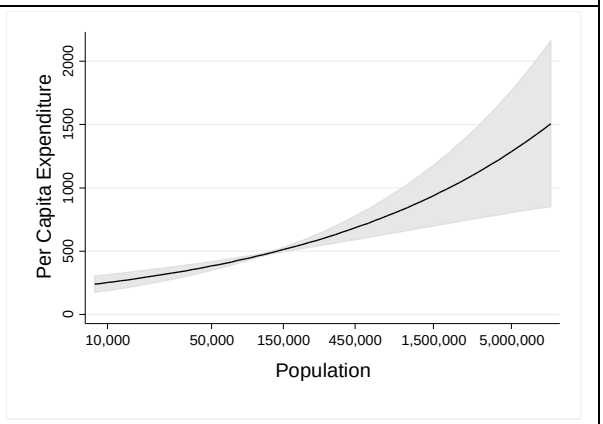
The regression reveals that the factors identified by historical research *do* correlate with expenditures. Cities that were more diverse (either having more nonwhite residents or a diverse foreign-born population from many different places) spent more money. Those places with large, dense populations witnessed higher spending per resident. In an alternate analysis, I add the number of fires per capita that the city experienced in 1902 and 1907. This variable is powerful. Increasing from the 25th to the 75th percentile (from 3 to 5 fires per 1000 people each year), increased spending by $50 per resident. Cities were clearly responding to the negative externalities associated with urbanization. Finally, cities with more capacity and demand (higher property values, more homeowners, and more professionals) also had larger budgets. These results are shown graphically in Figure 1.4. Figures show the marginal effect of each independent variable, holding all other variables at their mean value.

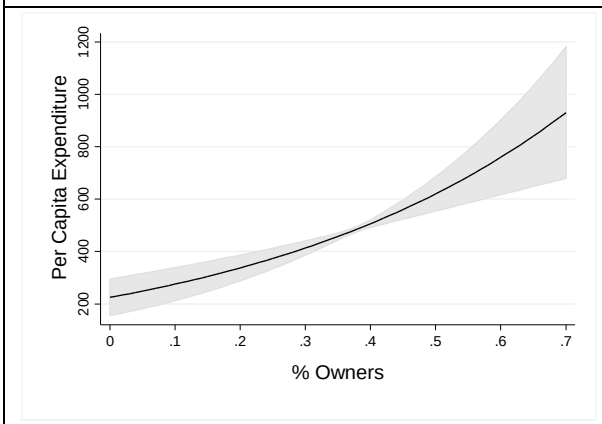
Figure 1.4: Factors Related to Expenditure in Cities, 1902-1937

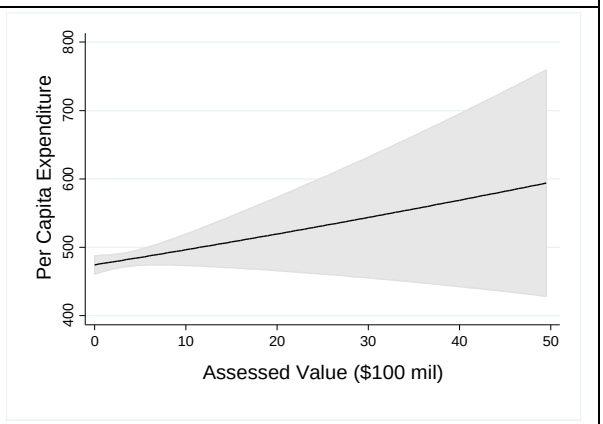


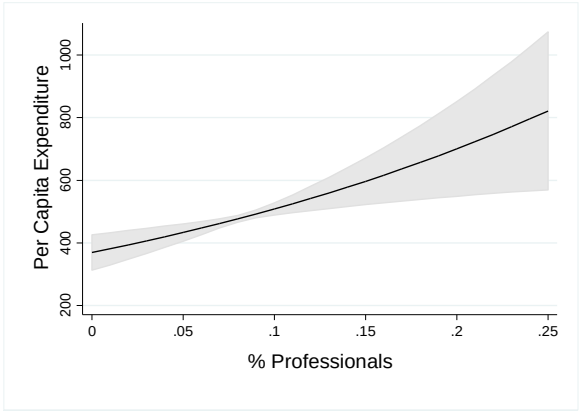












In this book, I argue that white, homeowners sought to institutionalize the residential segregation of poor and minority residents in order to protect their property values and control the distribution of public goods. They were supported in this pursuit by land-oriented businesses. The pattern of relationships presented in Table 1.1 and Figure 1.4 begin to explain this impetus – particularly the positive correlation between property ownership, assessed value, percent professionals, and municipal expenditures. Holding all other variables at their means, a city that was in the 25th percentile of home-owning, assessed value, and professionals (30% owners, $43 million in assessed value, 6% professionals) spent about $378 per resident. A city in the 75th percentile of all three measures (45% owners, $218 million in assessed value, 10% professionals) spent about $588 per person.

These relationships were circular. Local service provision was understood to increase the value of property. It was for this reason that the property tax was thought to be the most appropriate avenue for supporting local expenditures, as owners would be able to "recoup at least part of the levies in the form of higher real property worth" (Benson and O'Halloran 1987). Thus, property owners sought high levels of municipal services, which were expected to bring both direct benefits (from having access to clean water, paved streets, reliable fire-fighting, etc.)

and indirect benefits through increases in property values. In turn, cities expected owners to fund public goods. Yet, even in the early 20th century, owners were prone to believing that city governments were wasteful and they often opposed increases in taxes. Residents wanted high quality services, but were loath to pay for them.

Property owners' orientation toward both government and services was related to the emerging understanding of *who* should benefit from publicly-funded improvements (Myrdal 1944). The cities with the fastest growing service provision were also cities with high levels of racial and ethnic diversity. As Tretter (2012) explains, growth in municipal service provision operated "within a framework of white supremacy" (p10). Controlling who accessed the new benefits was of utmost importance. During this period, the vast majority of blacks, Asians, and Latinos lived in places where they lacked the right to vote; and everywhere, foreign-born residents had to be naturalized before participating (Keyssar 2000). Thus, the preferences of these groups hardly played a direct role in formation municipal policy. A white voter living in Birmingham in 1902 could be certain that no matter how much money the local government raised in taxes, black residents would have little say in how that money was spent. The same was true for a San Franciscan thinking about his Chinese neighbors and for an El Paso resident concerned with Mexicans in his city (Myrdal 1944, Chen 2000, Fox 2012). However, most public goods provided by cities were not targetable to individuals.[46]

When municipal governments provide streetlights and sewers, even those ineligible to vote benefit from these services. But, residential segregation could limit equality of access. Segregation made targeting services – at least to groups, if not individuals – easier. As will be

[46] Municipal jobs, particularly when distributed as patronage, are an exception to this statement. However, despite early accounts to the contrary, the presence of political machines actually depressed spending (Trounstine 2008, Fox 2010, Brown and Halaby 1984). Thus, it appears to be the case that growth in municipal governments has never really been driven by the logic of patronage.

shown in detail in the chapters to come, segregation allowed city governments to collect taxes from poor and minority residents, but underprovide services to them – thereby holding down the total tax bill. Oates (1981) explains that for many important local services such as education and public safety, the characteristics of residents are more important in determining the quality of the public good output than budgetary contributions. Thus, the generation of race and class segregation via policy enacted by local governments (such as zoning or urban renewal), was, in and of itself, a mechanism to improve municipal service provision. Segregation also ensured that the presence of poor and minority neighbors would not threaten property values. As the chapters ahead will show, it was in those places where city spending was high that segregation was institutionalized through local public policy; such institutionalization was pursued most adamantly by white owners and developers of property.

Explaining and Measuring Segregation

The high level of residential segregation in America has been tremendously well-documented (see Charles 2003, Ross 2008, and Boustan 2012 for extensive literature reviews). A smaller, though still well-developed, body of literature is focused on class segregation (see Bischoff and Reardon 2013 and Jargowsky 1996 for reviews). The debate over the fundamental causes of segregation is extensive and nuanced. Scholars have focused on two primary explanations: individual preferences for same race/income neighbors (particularly among whites and the wealthy) and market explanations (e.g. differences in the socioeconomic status of different racial groups and the ability to pay for quality housing/transportation among the poor).

Research on racial segregation largely concludes that the driving force behind residential separation is white preferences for same race neighbors (Cutler et al. 1999, Bayer, Ferreira, and

McMillian 2007, Charles 2006).[47] Boustan (2010) finds that in northern metropolitan areas, between 1940 and 1970, every black arrival from the South was associated with 2.7 white departures to the suburbs. Several scholars show that differences in socioeconomic characteristics such as education, income, wealth, and family structure cannot fully account for segregated living patterns for blacks, but *does* explain a fair amount of the segregation of Latinos and Asians (Bayer et al. 2004, Erbe 1975, Massey and Denton 1987 and 1993, Iceland and Wilkes 2006). Logan summarizes by explaining that racial segregation for blacks is due to the inability to "translate higher income…into residential mobility" (Logan 2011 p15).

Several scholars find that income inequality is an important driver of economic segregation (Bischoff and Reardon 2013, Watson 2009). Others concentrate on selection. Alesina et al. (2004) show that people are willing to give up economies of scale in order to avoid being in a jurisdiction with significant income heterogeneity and Bayer, Ferreira, and McMillian (2007) reveal that households self-segregate on the basis of education.

The links between race and class segregation also form a considerable literature. Some scholars like Denton and Massey (1991), Krysan et al. (2008), and Emerson, Chai, and Yancey (2001) find that whites avoid black neighbors *because* they are black, while others like Ellen (2000), Yinger (1997), Taub et al. (1984), and Harris (1999) argue that whites use black neighbors as a proxy for neighborhood quality. That is, whites do not avoid black neighbors per se, but rather choose what they perceive to be better neighborhood amenities or neighbor characteristics like wealth.

With only a handful of exceptions (e.g. Rothwell 2011, Pendall 2000), quantitative research on the causes of segregation ignores the political context in which it occurs. Local

[47] A small amount of scholarship shows that black preferences for same race neighbors contributes to segregation (Bayer, Ferreira, and McMillan 2007, Fossett 2006)

policies and political battles are crucial for understanding *how* white/wealthy preferences for homogeneity and socioeconomic inequalities are translated into residential patterns. To be sure, scholars have extensively documented the *private* mechanisms by which these factors affect segregation (e.g. via racial steering, mortgage discrimination, and willingness to pay for homogenous neighborhoods). But even private mechanisms may be shaped by local policies and political concerns. For example, I argue that white beliefs about available amenities in poor and minority neighborhoods are, in part, the product of under provision of public goods early in the 20th century. Cutler et al. (1999) find that these beliefs contribute to whites' willingness to pay higher housing prices in whiter neighborhoods. In the next section, I provide the first piece of evidence for this argument. Segregation is correlated with city expenditures – places that provide more services are also more segregated.

There are many different ways to measure segregation (e.g. the degree to which groups are disproportionately distributed across geographic space). Indices of segregation are typically correlated with each other, but capture different theoretical dimensions of separation and so, measure different things (Massey and Denton 1988). The two most commonly used measures are the index of dissimilarity and the index of isolation which can be intuitively interpreted respectively as the proportion of a racial group that would need to move neighborhoods in order to generate an even racial distribution given the racial makeup of the larger community, and the racial makeup of the neighborhood in which the typical member of the racial group lives. While these are obviously meaningful dimensions of segregation, neither measure includes the most relevant information from a political perspective. In politics, what matters is not just how individuals from different racial groups are distributed across neighborhoods, but also how large each racial group is relative to others and how big of an impact each neighborhood might have

on the vote. That is, we need a measure that weights diversity by group size and weights evenness by population size. The *H* index developed by Theil (1972) meets these criteria.

Theil's *H* Index measures the difference between the diversity of the city and the weighted average diversity of individual neighborhoods. Diversity scores for each neighborhood and the city as a whole are influenced by the relative size of racial groups, while the overall index is influenced by the relative size of each neighborhood, giving more weight to larger than to smaller places. Both types of weighting are key to understanding the political implications of segregation. We should expect the effect of segregation to be most pronounced when minority groups are unevenly dispersed across geographic units *and* represent a substantial share of the population.

Theil's *H* has a number of other useful qualities. Importantly, for understanding city politics, Theil's *H* can be calculated for more than two groups at a time (unlike either the dissimilarity or isolation indices). Additionally, it is the only index that obeys the principle of transfers in the multi-group case - the index declines when a minority resident (theoretically) moves to a neighborhood with fewer minority residents (Reardon and Firebaugh 2002). Finally, as will be discussed in the next section, Thiel's *H* is additive and can also be aggregated to higher levels or decomposed into its constituent parts.

Theil's *H* Index is built from Theil's entropy score which is a measure of diversity itself

$$E = \sum_{r=1}^{R} (\pi_r) \ln \frac{1}{\pi_r}$$

where π_r represents the proportion of the population in racial group r (or class group r if the index is measuring class segregation). The higher the entropy score, the more diverse an area

is.[48] The score ranges between 0 and the natural log of the total number of groups *R*. It is maximized when individuals are evenly distributed among the different racial groups (e.g. when

$$\pi_r = \frac{1}{R} \text{ for all } r$$

).[49] Entropy is calculated for each neighborhood individually and for the city as a whole.

The *H* Index measures the degree to which the diversity in each neighborhood differs from the diversity of the city as a whole, expressed as a fraction of the city's total diversity and weighted by the neighborhood's share of the total population.

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents total population of neighborhood *n* or city *c* and E is the entropy of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city, and 1 where all neighborhoods contain only one group.[50] This *H* Index serves as a key outcome to be explained throughout the book.

The dataset that I constructed to measure segregation is built from a number of different sources. The calculation of the *H* Index requires data on population characteristics at the sub-city level. Cutler et al. (1999) digitized sub-city demographics on race and immigration for 178 different cities from the 1890- 1950 Censuses. To this, I add available data that I encoded on homeownership from the 1900 Census and data from the Elizabeth Mullen Bogue files (1975) on

[48] Where any group's share of the population is 0, the natural log is set to zero, as is the convention in the literature (Iceland 2004).
[49] A scatterplot relating a white/nonwhite calculation of E to percent white is included in appendix Figure A1.1.
[50] In all analyses, neighborhoods are represented by Census tracts, which are relatively stable, contiguous geographic areas containing approximately 4,000 people. Most studies of segregation (e.g. Massey and Denton 1993) use Census tracts as a proxy for neighborhood (although this is not without debate, see for instance Logan et al. 2015).

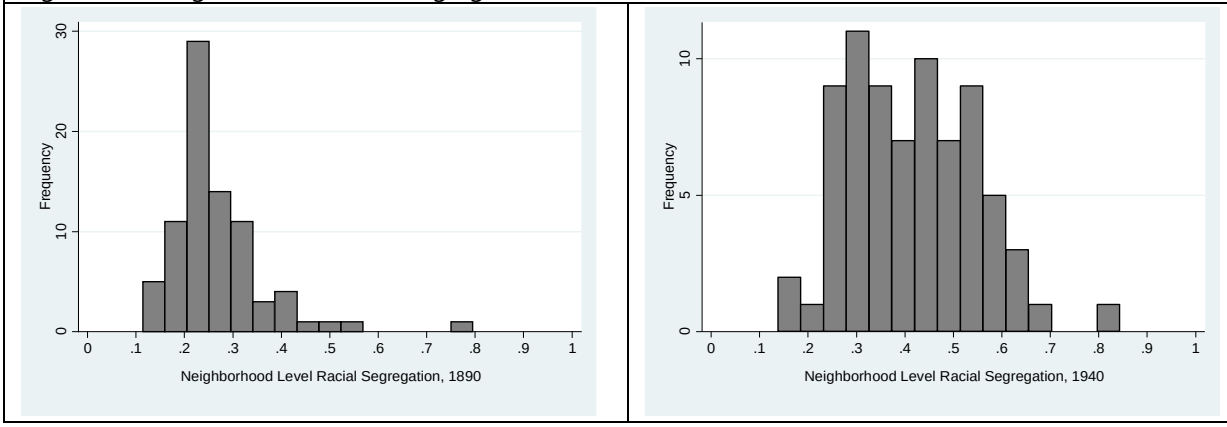
homeownership from the 1940 census.[51] For the 1970-2000 Censuses, I rely on a product developed by GeoLytics called the Neighborhood Change Database (NCDB). The NCDB matches and normalizes Census tract boundaries for each Census year, allowing for direct comparison in demographic changes across time. Finally, I add data from the 2007-2011 American Community Survey. These data allow me to create a panel dataset measuring segregation at the Census-tract level for cities and metropolitan areas for more than 100 years.

Figure 1.4 plots the distribution of racial segregation scores in 1890 and 1940, using data for the 80 cities with populations of at least 25,000 and with at least 1,000 blacks as of the 1890 Census.[52] In 1890, racial segregation patterns were similar from place to place, and generally fairly moderate – although higher than some historical analyses indicate (Cutler et al. 1999). Both features had changed substantially by 1940.

[51] The data from 1900-1940 are collected at the ward level (political units for electing city council members). Starting in 1940, the Census published tract-level data for some cities. Wards tend to be larger in area than tracts and therefore, suggest a smaller value of the segregation index without actually representing a lower level of segregation. To account for this, I adjust all ward-level estimates by a correction factor calculated using a set of 47 cities that reported both ward and tract-level data in 1940.

[52] For all figures presented in this chapter, the two groups used to calculate the *H* index are whites and all others for years 1890-1970. For 1980-2011, the groups are non-Hispanic whites and all others. Throughout the book, I calculate the *H* Index by tract-city-county-msa (Metropolitan Statistical Area). This means that cities which cross county lines end up with multiple observations. This is necessary because Census tracts are nested within counties – not cities. When presenting any analysis at the city level, I use the observation representing the largest share of the city population.

Figure 1.4: Neighborhood Racial Segregation in 1890 and 1940



Note: The white/nonwhite *H* index for 1890 is calculated using wards as the base population unit with an additional correction factor to make the data comparable to tract-level estimates. The *H* Index for 1940 is calculated at the tract level where available and at the ward level otherwise. Data provided by Cutler et al. (1999) and Bogue (1975).

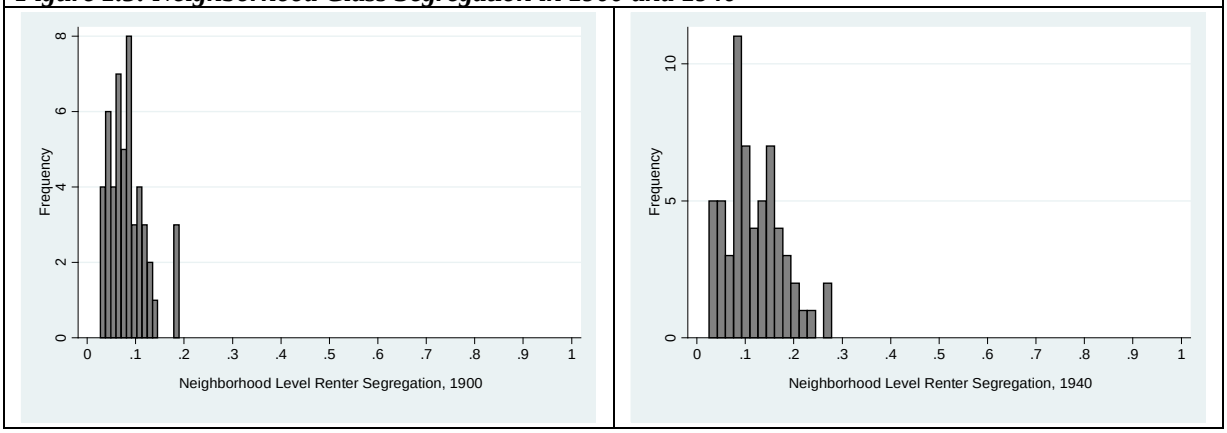
In all but a handful of cases, neighborhood-level racial segregation rose between 1890 and 1940 – on average rising 0.15, a change of about 65%. But the standard deviation is large at 0.13; some cities segregated much more intensely than others. There are many ways to consider measuring class segregation. Throughout the book I use two measures – the distribution of renters versus homeowners, and the concentration of households in the top income threshold.[53] The correlation between owner and wealth segregation is about 0.60. I rely primarily on the former measure for two reasons. First, it is available for the entire time period. More importantly, the existing scholarship indicates that it is property ownership – not wealth – which is the more important driver of local political participation and preferences (Fischel 2000, Oliver and Ha 2007). The downside of this measure is that, at an aggregate level, it is very resistant to

[53] The Census reports income categorically, not continuously; wealthy refers to the number of families in each Census tract with incomes above particular thresholds for each Census year. I use family as opposed to household income because the NCDB does not report household income at the tract level. The thresholds were determined by calculating the average family income for all Census tracts in the United States for each Census year. The wealthy threshold represents the income bin with a starting point closest to the 90th percentile of this distribution. The thresholds for each census year are: $35,000 for 1980, $75,000 for 1990, $100,000 for 2000, and $150,000 for 2011. All families with this amount of income or more are categorized as wealthy. Census tracts range from 0 to 100% wealthy, with a mean of 18%, a median of 13%, and a standard deviation of 16%.

change as the housing stock changes more slowly than demographics. Wealth segregation is a more straightforward measure of the residential divisions along socioeconomic lines, but it is only available starting with the 1970 Census and is less directly affected by city policy.

To demonstrate change over time, Figure 1.5 presents data on the renter/homeowner distribution within cities. This figure reveals that class segregation started off much lower and was more consistent from city to city as compared to racial segregation, and increased a small amount (0.037) between 1900 and 1940.

Figure 1.5: Neighborhood Class Segregation in 1900 and 1940



To determine how segregation correlates with expenditure in the pre-war period, I add to the segregation dataset the measure of *Logged Expenditures Per Capita* described in the previous section. Because segregation data are measured every decade, and expenditures in years ending in 2 and 7, I interpolate spending data. I then lag spending by five years under the assumption that demographic sorting takes time to respond to budgets. I regress *Racial Segregation* and *Renter Segregation* on the lagged *Expenditures* variable. As in the previous section, I add fixed effects for cities. This fixed effect model analyzes the relationship between lagged expenditures and racial segregation over time within cities. This accounts for variation across cities on all other dimensions that might affect segregation and spending.

Table 1.4: Correlations Between Spending and Segregation

	Racial Segregation			Renter Segregation		
	β	Std. Err	P>|t|	β	Std. Err	P>|t|
Expend. Per Capita, 5 year lag (logged)	0.100	0.010	0.000	0.026	0.003	0.000
Constant	-0.238	0.059	0.000	-0.052	0.018	0.005
N	368			179		
Number of Cities	118			56		
R^2 within	0.292			0.383		
R^2 between	0.020			0.010		
ρ	0.802			0.931		

Note: Fixed effect for cities included, but not presented.

The results, presented in Table 1.4, indicate a positive correlation between spending and segregation. The R^2 suggests that about 30 to 40% of the variation in city segregation levels can be explained by variation in the budget. Places with larger budgets were more segregated five years later compared to cities with smaller budgets up until the Second World War. For a host of reasons, this relationship would change going forward.

Suburbanization – Another Form of Segregation

Teaford (1979) argues that two conflicting forces animated city development in the late 19th and early 20th century. On the one hand, socioeconomic diversity generated an impetus for separation. As early as the mid-1800s, "the urban population was resolving itself into separate geographic spheres – factory zones, ethnic neighborhoods, upper-middle-class retreats, race track havens – and each zone sought local self-government as a means of protecting its own particular interests" (Teaford 1979, p23). This separation, Teaford shows, led to the explosion of newly incorporated municipalities. But, over the course of the next 50 years, many of these tiny new cities consolidated and/or were annexed into larger central cities for one primary reason: the provision of city services. Prior to 1900, suburban governments were simply unable to provide the quality of sewers, clean water, paved streets, uniformed police forces, and fire-fighting that

was available in the central city. As a result, as cities became more diverse, the forces of separation pulled people into different neighborhoods, but not into different cities.

However, in the period following the Second World War, America began to suburbanize rapidly (Rappaport 2005). Scholars have detailed the role that automobile accessibility (Glaeser, Kahn, and Rappaport 2008), highway construction (Nall forthcoming), federal programs encouraging home ownership (Jackson 1985), changes in the building industry, and rising incomes (Margo 1992) played in the growth of suburbs. The vast majority of people who arrived in the bucolic, grassy, neighborhoods filled with single-family homes were whites with incomes slightly (although not dramatically) higher than the median income of the central city (Cutler et al. 1999, Winsberg 1989). By about 1940, many larger suburbs were able to compete with central city service provision, thus increasing the attractiveness among residents, industry, and business to move away from the center. As Teaford (1979) explains, "while the forces encouraging unity were weakening, the forces of separatism and disunion remained powerful" (p84). Thus, in the middle of the century, central cities stopped growing politically and suburbs arose as powerful actors in the metropolitan universe (Teaford 1979, Danielson 1976, Miller 1981, Burns 1994). In 1970, more than half of all metropolitan area populations lived outside of the central city; a figure that would grow to two-thirds over the next 30 years. The rise of suburbs decoupled residential spaces from job spaces, and encouraged suburban residents to prioritize neighborhood amenities and property values in political decision making (Teaford 1979, Fischel 2004).

As they moved outside of the central city, suburbanites sought to protect their investments (high quality public goods and property values) in much the same way as their predecessors had – by institutionalizing segregation through public policies like land use

planning and zoning. Thus, the impetus toward separation in the latter half of the 20th century played out across, rather than within, city lines. The level of segregation is of crucial importance to politics. When cities are not segregated by neighborhood, district representation ensures that all residents within a particular location are likely to be provided similar services. When a district councilor wins a public park for his neighborhood all those who live nearby benefit. As the level of segregation shifts from blocks to neighborhoods, residents are more likely to lose representation. Still though, when segregation occurs across neighborhoods within cities, it is possible for residents of segregated neighborhoods to affect the delivery of municipal services through the political process. If a heavily minority neighborhood lacks a public park, residents from this neighborhood might mobilize to try to elect a mayor or city council member who is responsive to their demands. But when segregation occurs across cities, heavily minority cities have no ability to affect the distribution of public goods from neighboring white towns.

To understand how segregation patterns have changed over time, I compiled a measure of segregation that accounts for segregation both within cities and across them. In order to do this, I build on the measure of segregation presented in the previous section – Thiel's *H* Index. Theil's *H* is suited to this purpose because it is perfectly additive for nested geographies (Reardon and Firebaugh 2002, C.S. Fischer et al. 2004). In my case, census tracts are nested within cities, and cities are nested within metropolitan areas. Residents can be segregated in two ways – across neighborhoods within cities, or across cities within metropolitan areas. My measure combines these two types of segregation.

As explained above, the *H* Index measures the degree to which the diversity (*E*) of subunits differs from the diversity of a larger unit. For each Census year, I calculate *H* Indices at the two levels that are of interest – within cities and across cities. Respectively, these measure

the extent to which Census tract diversity differs from city diversity (H_{c_t}) and the extent to which city diversity differs from metropolitan area diversity (H_{m_c}). [54]

$$H_{c_t} = \sum_{t=1}^{T} \frac{P_t}{P_c}\left(\frac{E_c - E_t}{E_c}\right)$$

$$H_{m_c} = \sum_{c=1}^{C} \frac{P_c}{P_m}\left(\frac{E_m - E_c}{E_m}\right)$$

Where *P* represents total population of the tract *t*, city *c*, or metropolitan area *m*, and *E* represents the entropy of the geography ($E = \sum_{r=1}^{R}(\pi_r)\ln\frac{1}{\pi_r}$).

I combine the two indices to produce a total *H* Index for the metro area calculated at the tract level, H_{m_t}.

$$H_{m_t} = \sum_{t=1}^{T} \frac{P_t}{P_m}\left(\frac{E_m - E_t}{E_m}\right) = H_{m_c} + \sum_{c=1}^{C}\left(\frac{P_c}{P_m}\right)\left(\frac{E_c}{E_m}\right)H_{c_t}$$

To illustrate the two levels of segregation, Figure 1.6 provides images from a map of the population developed by Dustin Cable for the Weldon Cooper Center for Public Service at the University of Virginia. The map includes one dot for each person in the United States as of the 2010 Census, color coded by race (blue for white, green for African American, red for Asian, and orange for Latinos). [55]

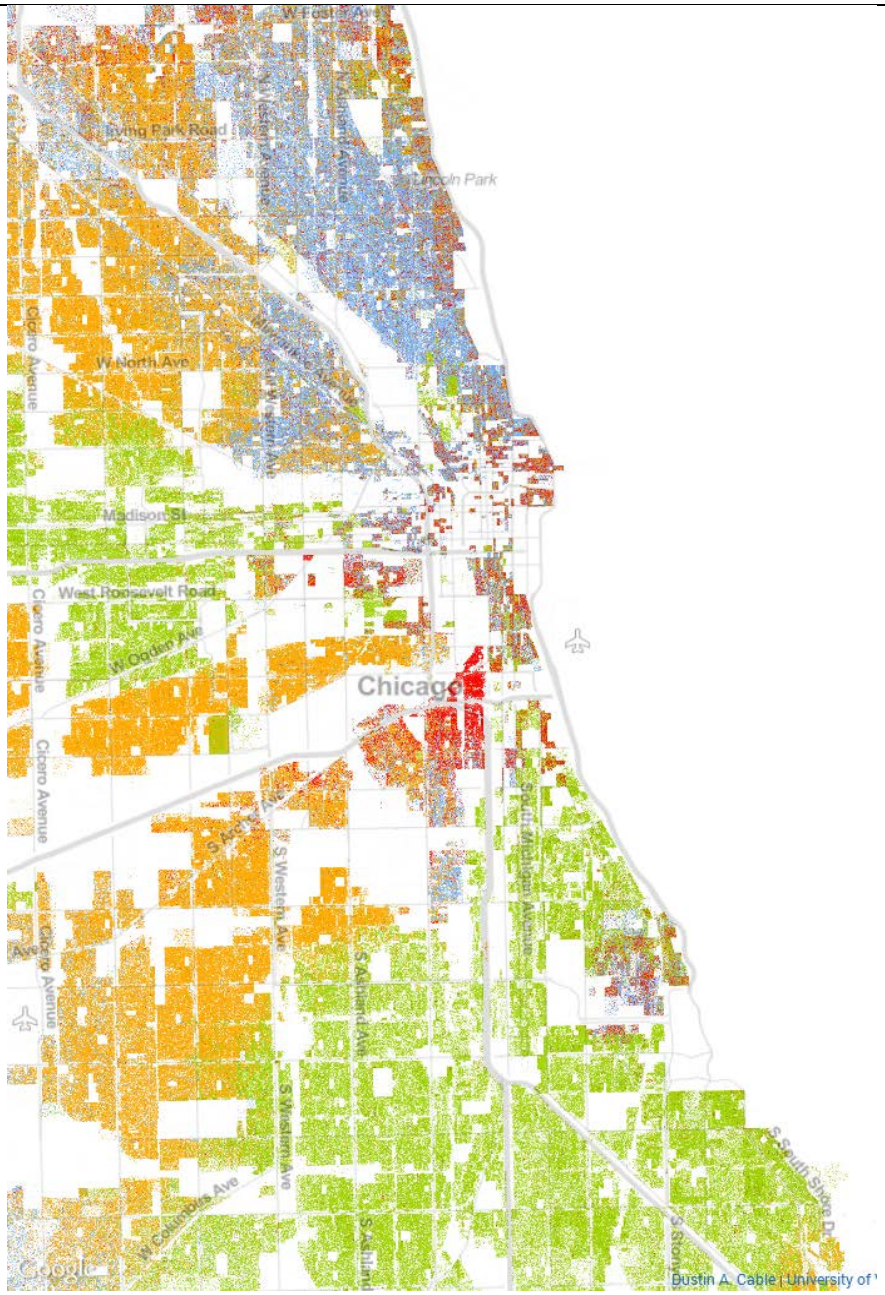
[54] Census tracts are perfectly nested within states and counties. However, in some cases, tracts cross city lines. In these cases, GeoLytics assigned the tract to the city containing the largest share of the tract population. In 2011, tracts are weighted by the share of population contained in each city. Observations are unique when defined by year, tract, city, county, and metropolitan area. Tracts located in unincorporated areas within a metropolitan area (even if they are denoted as places by the Census) are combined as a single unincorporated unit. Tracts outside of metropolitan areas are not included in the analysis. I use Metropolitan Statistical Areas and where possible, Primary Metropolitan Statistical Areas, as the highest level of aggregation (not Consolidated Metropolitan Statistical Areas which are much larger).

[55] Available at http://demographics.coopercenter.org/DotMap/index.html.

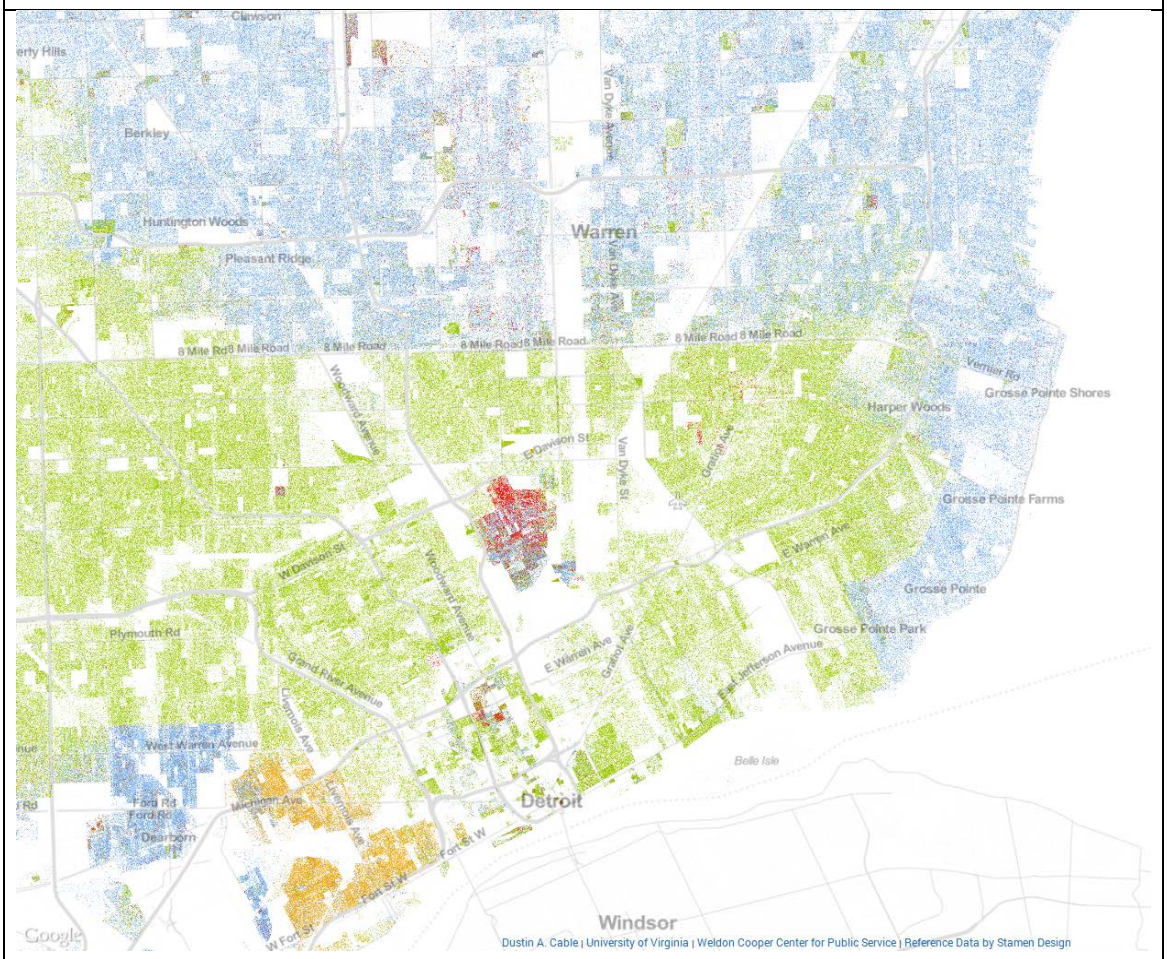
The upper panel shows Chicago, Illinois – a city in which whites are segregated from nonwhites in different neighborhoods (indicating a high amount of segregation across tracts within the city, H_{c_t}). The bottom panel shows a section of the Detroit, Michigan metropolitan area where racial sorting is much more prevalent *across* city lines as opposed to within them (indicating a high value of H_{m_c}).

Figure 1.6: Segregation Within City vs. Across Cities, 2010

Chicago, Illinois: Segregation within a City



Detroit, Michigan: Segregation Across City Lines



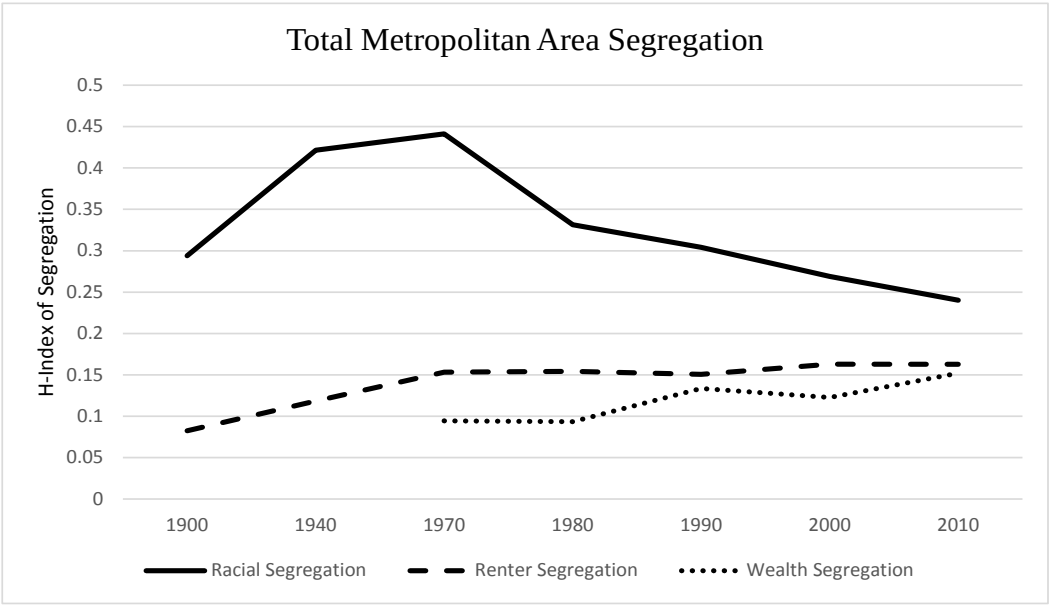
The maps make it clear that white and nonwhite residents of Chicago live in homogenous neighborhoods. Overall, the city is very segregated. The value of H_{c_t} in 2011 for Chicago was 0.379; the value of H_{m_c} (total segregation across cities) for the Chicago metropolitan area was 0.192. In the bottom panel, the neighborhoods within the cities of the Detroit metropolitan area are much more homogenous. The stark horizontal divider between the blue and green dots is 8

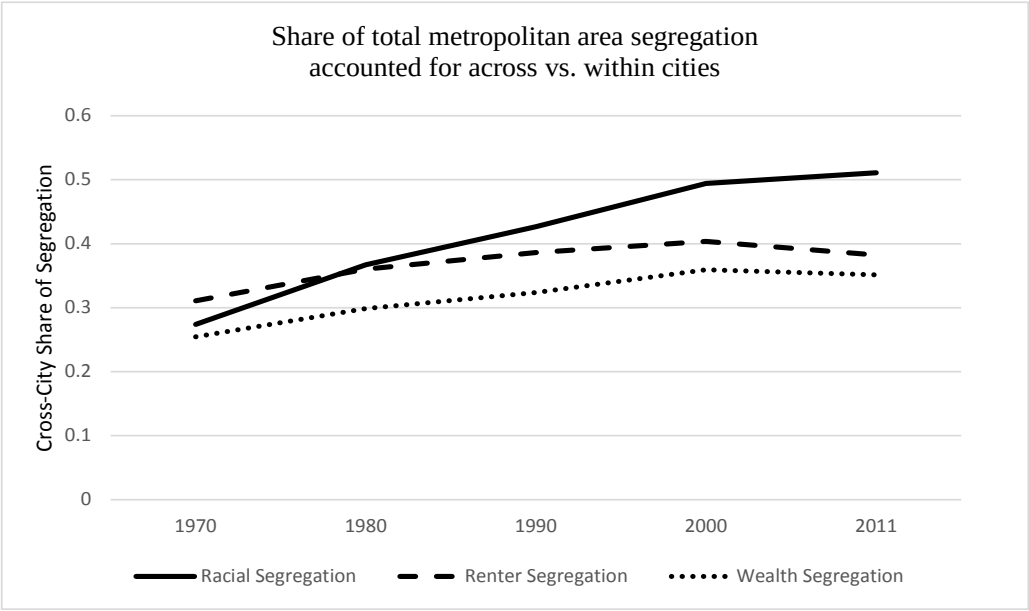
Mile Road which marks the boundary between Detroit and the neighboring ***city*** of Warren. A similar vertical division can be found on the right hand side of the picture, noting the boundary between Detroit and the cities of Grosse Pointe, Grosse Pointe Park, Grosse Pointe Farms, and Grosse Pointe Shores.[56] The value of H_{c_t} (within city segregation) in 2011 for Detroit was 0.220, while the value of H_{m_c} for the metropolitan area was 0.395.

How has metropolitan area segregation changed over time? The top panel of Figure 1.7 shows total metropolitan segregation measured at the tract level (H_{m_t}) since 1900, while the bottom panel shows the share of that segregation that was accounted for across cities rather than within them ($\frac{H_{m_c}}{H_{m_t}}$) from 1970-2011.

[56] The maps are shaded based on population density, hence the darker colors in Chicago.

Figure 1.7: Changing Metropolitan Segregation Patterns





These figures reveal that by 1970, racial segregation had peaked and begun to decline, while class segregation began a slow ascent. Between 1970 and 2011, in nearly every

metropolitan area in the United States, neighborhood segregation was exchanged for city level segregation along both race and class lines. The figures also show that historically, class segregation was much lower than racial segregation, but by 2011, the indices had converged substantially. The relationship between race and class segregation also increased over time. In 1990 (the earliest date for which I have data on all 330 metropolitan areas), the correlation between race and renter segregation was 0.19. It rose to 0.32 in 2011. The correlation between race and wealth segregation increased from 0.46 to 0.51 over this same period. The link between race and wealth segregation across city lines is even stronger; it was 0.70 in 2011. This tightening link between race and class is driven by changes in both race and class segregation, both within and across cities. However, these remain distinct demographic patterns.

Chapter 2: Local Government Action Contributes to Segregation 1900-1940.

Segregation along both race and class lines grew in tandem with the growth of cities (Meyer 2000). Race, ethnic, and class enclaves developed as urbanization brought white migrants, African Americans, and immigrants to cities (Teaford 1979). At the turn of the century, the predominant pattern of segregation occurred building by building, block by block, and sometimes several blocks by several blocks, but typically not by neighborhoods (Logan et al. 2015, Meyer 2000). Many cities featured multiple racial, ethnic, and class enclaves (Kellogg 1982, Rabinowitz 1978). In Philadelphia, for instance, about 40% of the black population lived in central city wards (4th, 5th, 7th, and 8th); but there were significant clusters of black homes in the 14th, 15th, 20th, 22nd, 26th, 27th, 29th, 30th, and 37th wards too (DuBois 1899). In Atlanta blacks lived in "Shermantown, Mechanicsville, Hell's Half Acre, Bone Alley, and Pigtail Alley," as well as "Darktown….Peasville…and Jenningstown," (Rabinowitz 1978, p106). By 1940 neighborhoods had become much more homogenous. So, while the residential location of people of color and the poor was nearly always restricted, the pattern of segregation changed during the years leading up to the Second World War. In this chapter I argue that local governments played a role in producing this change. Governments adopted zoning and other policies that created or reinforced segregation in service to business elites and white, property-owning constituents who were demanding a larger, more active city government.

In the very large social science literature on the causes and maintenance of race and class segregation, the contributions of local government are given limited attention.[57] Boustan (2012) concludes, "the most important [factor in the generation of residential segregation] appears to be individual choices of white households" (p318). Hayward (2013) agrees, arguing that restrictive

[57] The contributions of the federal government, on the other hand, are well covered (Jackson 1985, Massey and Denton 1993).

covenants were, "a more significant mechanism of racial segregation," than local government activities (p59).[58] Other scholars combine private and public actions into a single theoretical construct. For example, Cutler et al. (1999) provide evidence of "collective action racism" which involves, "specific policy instruments such as racial zoning or restrictive covenants prohibiting sales to blacks, or organized activities such as threatened lynchings or fire bombings that discourage blacks from moving into neighborhoods" (p476). Similarly, Dreier et al. (2004) associate racial zoning laws with biased real estate codes of ethics, racial steering, insurance redlining, and white violence concluding that, "racial segregation thus stems from the routine practices of the private real estate industry" and the spontaneous choices of urban residents "as well as from government policy" (p 120).

The role of government was important. For one thing, using the state to engage in promote restrictive collective action is qualitatively different than arranging segregation privately. Marshalling the power of city government institutionalizes prejudicial behavior and denies victims recourse. As Abrams (1955) explains, "passions and prejudices…unsanctioned by government…exhausted themselves" (p206). But when democratically elected local governments developed policies promoting segregation they became, "instruments of oppression against minorities" (p207).

Furthermore, while prejudicial attitudes and behavior were widespread during this period, government action was more variable. Understanding where and when local governments worked to create segregation along both race and class lines helps to clarify where segregation was likely to become entrenched and where it was more fluid, as well as provide insight into the factors that generate consequential local policy decisions.

[58] Of course, restrictive covenants required government action for enforcement. However, they could be generated without government involvement.

In this chapter, I explore the factors that contributed to the adoption of zoning laws. I argue that zoning was enacted by political elites seeking to manage the distribution of public goods to their core supporters. To present that argument, I first offer a historical narrative detailing the adoption of zoning laws by municipal governments. Then, I present a quantitative analysis of these adoptions. I find that cities with higher property taxes and larger budgets (where more was at stake), where Republicans (who led the municipal reform movement) had greater support, and where political participation was low (and thus more likely to be heavily skewed toward middle-upper class, native, white voters), zoning ordinances were more likely to be adopted. Finally, I analyze the effect of zoning adoption on future levels of segregation. I show that cities that were early adopters of zoning went on to become more segregated along both race and class lines than similarly situated cities without early zoning plans.

The dawn of the 20th century was an exciting time for local government. Populations exploded as the industrial revolution took hold. In this environment, the limited, caretaker approach to city governance became suddenly and profoundly insufficient for maintaining health, order, and property. Monkonnen (1988) explains, "cities could have chosen to ignore sewage, crime, unschooled children, and slow transportation by simply tolerating higher disease rates, offense rates, illiteracy rates, and traffic tangles" (p4). City governments did not take that path. Instead city governments worked aggressively to shape their social and economic environments. As Chapter 1 revealed, between 1890 and 1940, cities became modern – providing services like clean water, fire protection, police patrol, and road paving. It was in this environment that cities also began to seek control over space and residents' use of space through zoning and city planning. The end goal of this control, as was true of most Progressive Era reforms, was to improve the lives and opportunities for businesses and residents – more

specifically, US born Anglo residents (Tretter 2012, Woodward 1955, Toll 1969, Brownwell 1975).

As Monkonnen indicates, it was far from obvious that cities would assert control over their environments, but the rapid spread of slums, worries about skyscrapers blocking natural light, fears of conflagration, and concern about public health threats provided early inspiration for cities to invoke their policy power of regulation over nuisances (Toll 1969).[59] Reformers debated the correct policy solutions for these ills, recommending for example, density restrictions (Woodbury 1929), stricter building codes (Power 1983), the removal of alley dwellings (Silver 1997), or policies, including increased public transportation, that would encourage suburban homeownership for the working class (Baar 1996). In many cases, typically at the urging of local chambers of commerce, city councils chose to pursue zoning – regulating the use, height, and area of buildings and land (Brownwell 1975). Zoning was sometimes, but often not, combined with general development plans for the city. While zoning became wildly popular, planning did not. This decoupling of zoning from planning was viewed negatively by some leaders of the early planning movement who thought the creation of homogenous neighborhoods would be likely to reinforce social divisions and inequality (Toll 1969). Of course, this was often precisely the goal of zoning supporters.

The rise of social Darwinism contributed to the attraction of zoning as a solution for burgeoning problems. Social Darwinists argued that the evolution of humanity would follow a process of natural selection in which the environment played a defining role. As a result, controlling the environment was of utmost importance (Toll 1969). A related body of literature

[59] A number of important court battles ensured that zoning would be constitutionally allowed for the promotion of health, safety, welfare, and morals and did NOT constitute the deprivation of life, liberty, or property (see Hayward 2013 and Toll 1969 for overviews).

came to understand race and the differences between racial and ethnic groups as biologically rooted, hence, immutable (Hayward 2013). According to this doctrine, the inherent inferiority of blacks and other people of color (Native Americans, Chinese, Japanese, Mexicans), the preservation of "race purity" demanded, "segregation and discrimination in recreation, in religious service, in education, before the law, in politics, in housing, in stores, and in breadwinning" (Myrdal 1944, p58). Additionally, scientific and medical experts as well as politicians believed that the unsanitary habits and homes of the poor and people of color spread epidemic disease (Shah 2001, p6). In combination, these new theories offered a convincing rationale for the creation of special districts to quarantine offending groups. By 1930, about half of all large cities in the US had adopted comprehensive zoning plans.

Political leaders often used threats to public safety as a rationale for legislating segregation. New York's 1916 zoning law, the first comprehensive zoning ordinance in the nation, sought to limit the health threat posed by skyscrapers which blocked natural light and so, contributed to the spread of tuberculosis (Toll 1969, p154). Because immigrants and Blacks were viewed as disease carriers, segregating them was a typical goal of zoning. In San Francisco, the first city to segregate explicitly on the basis of race, whites had grown increasingly paranoid that Chinese residents were spreading diseases like smallpox and tuberculosis and in 1890, enacted an ordinance that required all Chinese residents and their businesses to move, within 60 days, to the section of town which had been set aside for, "slaughterhouses, tallow factories, hog factories, and other businesses thought to be prejudicial to the public health or comfort" (McClain 1996, p224). In Baltimore, segregationists agreed that, "blacks should be quarantined in isolated slums in order to reduce the incidents of civil

disturbance, to prevent the spread of communicable disease into nearby white neighborhoods, and to protect property values among the white majority" (Power 1983, p301).

The belief that zoning would create stability in property values was widely held and generated strong support from land owners, commercial organizations, bankers, realtors, and developers (Abrams 1955, Brownell 1975, Weiss 1987). Boston's first height restriction was passed in 1892 at the behest of downtown property owners who feared that the new skyscrapers would lead to an oversupply of office space and drive down property values (Kennedy 1992). In some places, this view had to be cultivated. In Los Angeles, for example, some developers were opposed to the city's 1908 zoning law because they worried it would inhibit growth (Weiss 1987). To combat such reservations, early supporters of zoning made sure to argue that their proposals would, "enhance, not detract from property values," (Toll 1969, p150). Zoning could easily have been invoked to improve the quality and health of working and lower class neighborhoods and limit land speculation (as some of the early reformers argued it should); however, "political pressures from those less inclined toward broad civic improvement" won out (Silver 1997, p24).

As zoning practices spread through the 1920s, emphasis on the enhancement of property values became the dominant argument; almost universally, it was believed that the wrong sorts of people residing or sometimes even working in an area could negatively impact property values. Abrams (1955) quotes an early real estate text which argued that, "…property values have been sadly depreciated by having a single colored family settle down on a street occupied by white residents," and another that claimed a similar effect of "unassimilated aliens." Both prescribed "rigid segregation" as a solution, "no matter how unpleasant or objectionable the thought may be to colored residents" (p159).

Aside from adding wealth to property-owning and voting residents, city governments had an even more powerful reason to protect and enhance property values – taxes (Lees 1994). An advertisement run by 5th Avenue merchants in the March 5th and 6th, 1916 editions of the New York Times argued that failure to support the city's new zoning plan would lead to "vacant or depreciated property," which would lead to "reduced taxes, leaving a deficit made up by extra assessment on other sections" (p5). Rising property values allowed municipal governments to grow without increasing tax rates. When some property values actually declined, municipal officials faced the unwelcome task of raising tax rates or cutting the budget.

As municipal governments began to spend vast sums on improving the lives and environments of residents, ensuring that the right (white/wealthy) residents benefited from the new city services became of utmost importance. This goal was clear to observers at the time. Booker T. Washington explained that, "the negro objects to being segregated because it usually means that he will receive inferior accommodations in return of the taxes he pays." Such objection stemmed from the belief that segregation would ensure that, "the sewerage in his part of the city will be inferior; that the streets and sidewalks will be neglected, that the street lighting will be poor; that his section of the city will not be kept in order by the police and other authorities, and that the 'undesirables' of other races will be placed near him." Thus, Washington concluded, "when a negro seeks to buy a house in a reputable street he does it not only to get police protection, lights and accommodations, but to remove his children to a locality in which vice is not paraded" (Washington 1915, p113-114). Frequently, white elites made arguments that taxing whites to pay for black public goods (like schooling) was "an indignity." One delegate to the Louisiana Constitutional Debate in 1864, incredulous at the proposition asked, "Shall we tear the slave away from his master and then force the master to educate him?"

(Louisiana Constitutional Debate, quoted at length in Bond 1934, p16-17). As a result, in many cities (see Chapter 3), black areas lacked municipal services such as, "paving, water, sewerage, lighting and garbage removal," (Knight 1927, p53; also Myrdal 1944).

Given that zoning was viewed as a way to both increase property values and maintain exclusivity in the distribution of public goods, it is unsurprising that Southern cities made early use of zoning to hem in expanding black neighborhoods and create clear dividing lines between white and black residential areas. Of course, the development of racial zoning in the South was part of a much larger process of reconfiguring race relations after the Civil War. During the period of Reconstruction and Redemption, whites subordinated, exploited, and killed blacks, but even in this context, the legal segregation of the races was not a foregone conclusion (Woodward 1955). [60] In fact, although Jim Crow laws were widespread, most Southern cities did not legislate residential segregation directly.[61]

Blacks being able and willing to live in white neighborhoods was a necessary (although not sufficient) condition for the enactment of legislation. Baltimore passed the first racial zoning law directed at blacks in 1910 following the violent response of white residents as black migrants moved into previously all white areas. Baltimore's ordinance prohibited whites and blacks from moving into city blocks occupied by a majority of members of the other race. Quite aware of the requirements of the 14th amendment, the Baltimore council argued (and the Maryland Supreme Court agreed), that because the ordinance placed the same limitations on both racial groups it

[60] One vivid example of the ways in which Jim Crow changed existing practice comes from New Bern, North Carolina. In 1913, the city aldermen passed an ordinance which required that all "colored bodies" buried in the public cemetery be dug up and moved to a segregated location.
http://www.newbernsj.com/article/20140209/Opinion/302099914

[61] Rabinowitz (1978) argues that the picture was different with respect to schooling. Here, segregation was immediate and unchanging after the end of the war.

was not discriminatory (Virginia Law Review 1916).[62] The vote of the city council fell along party lines with all of the Democrats in support and all of the Republicans opposed.[63] Republicans were joined in their opposition by the entire community of black residents, some real estate brokers, and white homeowners who lived in integrated neighborhoods (Power 1983). Democrats were not just responding to their white voters in their promotion of segregation. Limiting black residential location also bolstered Democratic political power by ensuring that blacks would be packed into certain wards; thereby reserving the rest of the city for Democratic control (Rabinowitz 1976).

In some places, black political power slowed or inhibited the enactment of segregation ordinances (Rice 1968). In St. Louis, an effort to pass a segregation ordinance failed because it was opposed by a significant number of city elites (including most of the city's leading Republicans, labor interests, religious leaders, and newspapers). The National Association for the Advancement of Colored People (NAACP) and the Knights of Pythias lobbied the St. Louis city government tirelessly and ultimately convinced 21 of the 28 aldermen and the mayor to vote against it. In 1912, the city went so far as to station five police officers at the house of a black family to protect them from, "possible attack by whites who resent what they term a 'Negro invasion' in their residential district" (*The Crisis* 1912 Vol 4, No 6, p272). In a low turnout election in 1916, supporters of the segregation ordinance won a city referendum and the city immediately began mapping the race of each city block. (Meyer 2000 19-21). In Kansas City, Missouri, blacks had a modest amount of political power due to their ties to the (Democratic)

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[62] Although the Court agreed with the city's reasoning about the 14th amendment, it ultimately declared the ordinance unconstitutional because its provisions were retroactive thereby representing a taking by the government. (*State v. Gurry* 121 Md. 534 (1913))

[63] Republicans were generally (tepidly) supportive of black rights in Baltimore and between 1890 and 1931, six black Republicans served on the Baltimore City Council (Greene 1979). Over the course of their careers, these councilors led the city council to provide significant contributions to Baltimore's black community; but none were able to defeat the segregated housing legislation.

Pendergast machine. Despite support from a significant segment of the city's white population, a racial zoning ordinance never made it past the lower chamber of the city council (Meyer 2000).

Bacote (1955) reports that throughout the late 1800s in Atlanta, black support was frequently courted by white factions. For instance, in the 1891 election, black candidates were nominated for council positions in the 1st, 4th, and 6th wards on the Citizens' ticket (an anti-prohibitionist faction of the Democratic Party). White factions did this when they were in danger of losing the election – in 1891 the anti-prohibition Democrats were worried about a Populist victory. To prevent white factions from seeking black support in the future, the Democratic Party adopted the white primary in 1892, and the state of Georgia enacted a new constitution in 1908 which included a character requirement, a literacy test, and made property ownership a condition for registration (Bayor 1996). These changes severely restricted black participation, ensuring that white factions would only rely on white votes. The evisceration of the black electorate and black representation opened the way to the city's enactment of segregation ordinances (Key 1949, Kousser 1974, Woodward 1955).

Atlanta enacted a racial zoning ordinance on the heels of a violent race riot in 1906. The riot erupted after local newspapers reported four alleged (but never substantiated) assaults upon white women by black men. According to Garrett (1969), the riot was ignited by the sight of black passengers riding next to whites on street cars. A white mob killed and beat dozens of black Atlantans over the course of three days. A concerted organizing effort among the city's African American population followed. White elites and politicians denounced the riot, and a public/private relief fund was even established for families of the murdered victims (Garrett 1969). However, the riot also led many whites to conclude that, "separation of the races is the only radical solution of the negro problem in this country" (Charleston News and Courier,

quoted in the New York Times, September 30, 1906). Following the passage of the ordinance in 1913, all blocks in the city were assigned racial designations based on the race of the majority of current residents (Silver 1997).

Fighting racial zoning was one of the early nationwide causes to be adopted by the NAACP (Rice 1968, Meyer 2000) and due to the organization's work, in 1917, the Supreme Court ruled racial zoning unconstitutional in *Buchanan v. Warley*. In the *Buchanan* decision the justices did not seek to protect the rights of black property buyers or to prohibit "amalgamation of the races," but rather to protect the right of white owners to, "sell or lease their lands and houses to whomsoever they pleased" (Virginia Law Review 1928, p531).[64] Nonetheless, the Chicago Defender declared that the, "hydra-headed monster of segregation…was killed by the Supreme Court," and argued that the, "decision [was] a direct slap in the face to white southern oligarchy." (November 10, 1917). According to Rice (1968), it was also a, "victory for moderate whites and Republicans" (p197).

Following *Buchanan*, many cities sought to enact constitutionally defensible racial zoning plans by turning to comprehensive city plans (Silver 1997).[65] In 1914, a racial zoning ordinance was proposed in Birmingham while the *Buchanan* case was already moving through the court. A group of black attorneys convinced the Birmingham city council that they could face a costly legal battle if the Court ruled against Louisville's ordinance. In order to prevent this, and to appease white demands for segregation, the council chose instead to adopt a

[64] The Court found that the ordinance improperly restricted the rights of property owners to dispose of property. It did not challenge the separate-but-equal doctrine that was in place as a result of the 1896 *Plessy v. Ferguson* decision.

[65] San Francisco was the first city to utilize a form of use zoning for a racial purpose. In 1885, the city enacted a set of regulations for laundries operating in residential areas in an attempt to keep Chinese residents (who owned nearly all of the laundries and typically lived above them) from white neighborhoods. The law was invalidated by the Supreme Court in the 1886 case *Yick Wo v. Hopkins* in which the Court found that a law which is race neutral on its face may still violate the 14th amendment if administered in a prejudicial manner.

comprehensive zoning plan in 1926 that included racial designations for different city zones (Connerly 2005). Atlanta's 1922 revision of the zoning ordinance combined zoning categories of land use and building regulations with racial designations. For instance, the city's master zone map noted that, "unless otherwise designated on this map, all areas designated as dwelling house districts are also class H1 height districts and white race districts." Other areas were designated as "colored district and an apartment house district" or "colored district and dwelling house district."[66] In 1929, the zoning code was again revised, this time including a prohibition on occupying a home on a street where the majority of residences were occupied by persons whom the resident was forbidden to marry by law (Meyer 2000). Eventually, the court ruled against these ordinances and by the 1930s segregationists had dropped the racial designations in favor of comprehensive zoning.

As the court struck down plans that endorsed outright racial segregation, the case for other forms of zoning had been building. A series of judicial decisions established the bounds of permissible approaches to regulating the uses and size of buildings. For instance, the court determined that exercise of police power (e.g. the authority to regulate behavior and enforce order), "must be reasonably adapted to the purpose of protecting some interest of the community," (C.C.S. 1925 p417) and that nuisance regulation and other use restrictions, "must bear a substantial relation to the public health, safety, morals or general welfare" (Monchow 1928, p323). Zoning ordinances spread rapidly throughout the 1920s, particularly after the Supreme Court determined that comprehensive zoning would not require cities to compensate owners for losses in prospective land values in the 1926 case *Euclid v. Ambler Realty Company*.

[66] https://cityloci.files.wordpress.com/2014/07/6-atlanta-19291954.pdf

Zoning adoption was also propelled by the Republican-led federal government. In 1922, under the direction of Secretary Herbert Hoover, the Department of Commerce issued a template for state enabling laws in the Standard State Zoning Enabling Act. The Act was published in 1924 and a revised edition was released in 1926. Thus, while Republicans tended to oppose zoning in the South, they were frequently the drivers elsewhere. In Boston, Republicans were shut out of city government by the powerful Democratic organization, leaving them to pursue zoning laws through the Massachusetts state legislature instead (Kennedy 1992, p113).

The arguments surrounding the adoption of comprehensive zoning were broad but imbued with municipal Progressivism's race and class prejudices (Bridges 1997, Trounstine 2008). Comprehensive zoning supporters highlighted benefits such as the "adequate provision of light and air," "stabilization [sic] and protection of property values," "protection and maintenance of the home and home environment," "to apply the most up-to-date methods of sanitation and hygiene, "simplifying the problems of street traffic regulations," and the prevention of congestion (A.C. Holliday 1922, p217). By separating industrial, commercial, and residential uses into separate districts each with standard regulations regarding the use, height, and area of buildings, zoning would make, "every town, city or village a more orderly, convenient, economic and attractive place in which to live and work," (A.C. Holliday 1922, p218,). One key to ensuring high property values and orderly living arrangements was the ability for zoning ordinances to prevent noxious uses from polluting residential neighborhoods (Fischel 2001). Apartment buildings constituted one such noxious use.

In *Euclid v. Ambler*, Justice Sutherland explained that the apartment house is often a, "mere parasite, constructed to take advantage of the open spaces and attractive surroundings... interfering by their height and build with the free circulation of air and monopolizing the rays of

the sun…depriving children of the privilege of quiet and open spaces for play enjoyed by those in more favored localities…until, finally, the residential character of the neighborhood and its desirability as a place of detached residences are utterly destroyed. Under these circumstances, apartment houses, which in a different environment would be not only entirely unobjectionable but highly desirable, come very near to being nuisances." (p394-395).

In allowing the protection of single-family home neighborhoods, *Euclid* laid the groundwork for the long-term shift from a country segregated by race to one that became increasingly segregated by income. In the early 20th century, race and income were so strongly overlapping that denying apartment buildings in a neighborhood of single-family homes would also largely prohibit blacks and many immigrants from residency. Making this point, Bruno Lasker, editor of Survey Magazine asked:

> "Why, in this country of democracy, is a city government, representative of all classes of the community, taking upon itself to legislate a majority of citizens – those who cannot afford to occupy a detached house of their own – out of the best located parts of the city area, practically always the part with the best aspect, best parks and streets, best supplied with municipal services and best cared for in every way? Why does it deliberately 'segregate' the foreign-born who have not yet become sufficiently prosperous to buy or rent a home under building regulations which preclude the possibility of inexpensive development and construction?" ("Unwalled Towns," *The Survey*, Volume 43, 1920, p677).

Lasker suggested that the answer to his question was the dominance of politics by wealthy property owners who sought to employ, "public power for the purpose of protecting sectional interests" ("The Issue Restated," The Survey, Volume 44, 1920, p278). Segregation enforced via zoning was a means to accomplish this end. In cities like Chicago, Kansas City, and Los Angeles, some of the most powerful voices in support of zoning were homebuilders and real estate boards who stood to gain monetarily from segregation (Gotham 2000).

With such wide-ranging positive effects for powerful interests, it is easy to see why zoning became so popular. Yet, by the close of the 1920s, many cities had not yet adopted zoning plans. I have argued that zoning was a tool that enables elected officials to make it easier to limit the distribution of public goods to certain constituents and to ensure high property taxes, and that it was successfully implemented where zoning supporters had political power. In order to provide more systematic evidence of this argument, I collected data on all of the cities that enacted *zoning ordinances* between 1900 and 1930. I gathered racial zoning information from several reports including Rice (1968), Connerly (2005), Silver (1997), and numerous issues of the NAACP's *Crisis Magazine*. To encode general zoning plans, I drew on an article published in *The American City* by Norman Knauss in 1929, which listed the years that zoning ordinances were enacted. Knauss reports having sent a survey to all municipalities with the authority to enact zoning. His list includes 768 municipalities that reported having an ordinance. I coded the city year in which zoning was enacted as a 1 and years leading up to that date as a 0. Cities exit the analysis once they enact zoning. Cities that were included in the Census but had no zoning law by 1929 are coded 0 for the entire time period. Zoning is my dependent variable. To these data, I merged city spending and demographic data culled from the Census (which are described in Chapter 1).

My primary independent variables are per capita total *Expenditure* and *Property Taxes*. I log the total expenditure variable because the data have a strong rightward skew. I expect both of these variables to be positively correlated with zoning. Where spending and property taxes were higher, local officials would have a greater incentive to protect the existing distribution of public goods and the total tax revenue. I include two additional political variables – the county-level *Republican presidential vote share* (linearly interpolated for non-election years) and county

level *Turnout* of age-eligible voters.[67] Republican vote share is a rough proxy for the degree of support for regulatory policy, of which zoning was an example. I expect that greater Republican support will be associated with a higher likelihood of implementing zoning – except in the South. A range of voting restrictions were in place throughout the time period under consideration (Keyssar 2000) and I include the turnout of the age-eligible population to capture the permissiveness of the electoral environment. This measure is preferable to including state level laws like the poll tax or literacy test because it allows for sub-state variation in the electoral setting. Generally, higher turnout is associated with greater participation of the poor and people of color (Hajnal 2010); populations that both tended to be opposed to zoning plans and stood to lose from their implementation. Thus, I expect that where turnout was higher, the likelihood of enacting zoning was lower.

A wide range of alternative explanations for the adoption of zoning were proposed by contemporary observers and later analysts of the movement, many of which are correlated with the political factors I seek to test. Writing about racial segregation laws, Woodward (1955) argues that the economic depression at the end of the 1890s led to "aggression against the minority race" (p81). To account for this possibility, I include a measure of the share of the total population that was *Unemployed*, linearly interpolated from the Census of Population and Housing. Fischel (2004) claims that zoning adoption followed the invention of trucks and busses, which made it feasible for businesses and apartment buildings to be built in residential and suburban areas, away from rail lines. I include per capita spending on *Roads*, which include street paving, street cleaning, and street lighting to capture differences in vehicular accessibility. In the "History of Zoning," Gordon Whitnall explains that, "the practice of zoning began…when

[67] This denominator includes men over the age of 21 until 1919 and both women and men over the age of 21 in 1920 and later elections.

the concentration of population in cities began to be pronounced" (1931, p2). The "urge for zoning" he goes on to say, "has arisen from the desire and the necessity to bring some order out of the chaos that has resulted from the anarchistic development of our cities." I include the *10 year rate of change* in total population and population *Density* (persons per acre) to capture urbanization. To measure threats of disease and conflagration, I include per capita spending on *Health care* and *Fire-fighting*.

As described above, contemporary supporters of segregation ordinances often asserted the protection of white, single-family neighborhoods as the primary goal. To measure the social threat of black and foreign populations, I include the share of the population that is *Black*, *Foreign Born White*, and *Foreign Born Non White*. To measure the threat of lower-income (apartment dwelling) populations I include the share of the population *Renting* their homes. To capture the presence of noxious industry that might be better contained in a zoned city, I include the share of the employed population working in *Manufacturing*. This variable also captures an argument presented by Connerly (2005): that industrialists preferred to maintain segregated cities in order to dampen the threat of union organizing across racial lines.

Many scholars (e.g. Woodward 1955, Myrdal 1944, Blumer 1958) understand segregation as a mechanism to bolster hierarchical racial control, as social distance may preserve the relative status advantage of whites. For instance, Wade (1967) argues that segregation was, "rooted in the white's need for discipline and deference," and that it, "provided public control to replace dwindling private supervision of the master over his slave" (p278). If this is the case, we should expect that cities with existing patterns of segregation would be most likely to institutionalize the practice. It is also possible, however, that cities with high levels of segregation would have had no need for legislation (see Silver 1997 on Roanoke). To adjudicate

between these two possibilities, I include a dummy variable coded 1 if the city had *Segregated Schools*. This variable is encoded from Johnson (2015) who characterizes states as requiring segregation, permitting segregation, prohibiting segregation, or with no segregation statutes. My variable is coded one for states that require segregation, .5 for states permitting segregation, and 0 for all others. Bobo, Kluegel, and Smith (1997) argue that the political institutionalization of Jim Crow ideology was driven by the needs of the Southern economy, particularly the exploitation of black agricultural labor. On the other hand, Godsil (2006) suggests that whites with a significant stake in retaining a large black laboring class may have opposed racial zoning, as such ordinances might lead black workers to leave the city. To account for either possibility, I include for the share of the workforce employed in the *agricultural sector*. If Bobo et al.'s theory applies to zoning, we would expect a positive relationship between agricultural dominance and zoning. We'd expect the inverse if Godsil is correct.

My observations represent 4293 city-years from 240 cities. All spending data are inflation adjusted and linearly interpolated. Census data are linearly interpolated as well. I run logistic regressions with errors clustered by city. I include fixed effects for region, which means that these comparisons are all within the same area of the country. That is, the regressions analyze the effect of city expenditures on the adoption of zoning in each of four regions – West, North, Midwest, and South. Column 1 shows the base model with no controls. Column 2 includes all of the above-described controls. In Column 3, I change the dependent variable to focus on racial and comprehensive zoning. Here, the dependent variable is coded 1 when the city adopts either race zoning or comprehensive zoning and is coded zero otherwise. In this analysis, I present an interaction between Republican vote share and region to show how party

politics differed in the South. These results are presented in Table 2.1 and summary statistics are shown in appendix Table A2.1

Table 2.1: Effect of Local Political Factors on Zoning Implementation

	Column 1		Column 2		Column 3 Race and Comprehensive Zoning Only	
	β	P>|z|	β	P>|z|	β	P>|z|
Expenditure $ Per Capita (logged)	0.787	0.008	1.255	0.000	1.354	0.000
Property Taxes $ Per Capita	0.052	0.000	0.049	0.007	0.072	0.000
Presidential turnout	-2.094	0.005	-3.18	0.001	-2.639	0.015
Republican Vote Share	5.133	0.000	5.249	0.000	11.292	0.002
% For. Born White			-4.645	0.011	-5.797	0.003
% For. Born Non White			-24.709	0.011	-26.98	0.065
% Black			-2.162	0.359	-3.398	0.177
Highways $ Per Capita			-0.330	0.027	-0.292	0.047
Health $ Per Capita			0.234	0.482	-0.322	0.505
Fire $ Per Capita			0.224	0.203	-0.052	0.759
Density			-0.006	0.637	-0.010	0.499
% Renters			2.136	0.170	5.743	0.001
% Employed in Manufacturing			2.643	0.049	3.361	0.027
% Employed in Agriculture			5.527	0.000	6.735	0.000
10 year population growth rate			-1.355	0.026	-2.242	0.001
School segregation			1.276	0.068	1.150	0.115
% Unemployed			5.338	0.052	5.788	0.073
Midwest	-0.621	0.019	-1.567	0.000	0.442	0.860
North	-0.883	0.000	-1.788	0.000	1.868	0.441
South	0.313	0.349	-1.628	0.056	4.287	0.089
North * Rep. Vote Share					-1.069	0.786
Midwest * Rep. Vote Share					-4.805	0.207
South * Rep. Vote Share					-8.347	0.030
Constant	-8.436	0.000	-8.073	0.000	-15.241	0.000
N	4293		3514		3687	
R^2	0.123		0.178		0.170	

Note: Logistic regressions; Robust Standard Errors clustered by city

Table 2.1 offers strong support for my claim that cities with greater public goods expenditures and more property tax revenues were more likely to implement zoning ordinances. With all else equal, shifting from the minimum per capita expenditure (about $4) to the maximum (about $476), changes the probability of adopting a zoning ordinance from 0.004 to 0.15. Similarly, cities with the lowest property taxes per capita (about $2) rarely adopted zoning ordinances, while those with the highest taxes ($67 per person) had around an 18% chance of implementing zoning. Where turnout of the voting age population was higher, zoning was less likely to be adopted. This result supports Toll's (1969) claim that, "the demand neither for zoning nor for planning had grown out of any widespread outcry in the cities of the United States" (p199). Zoning adoption appears to have been led by the Republican Party, except in the South, where Republican voting strength limited the likelihood of adoption of comprehensive and racial zoning ordinances.[68] These data fit the historical narrative presented above well.

In addition, many of the control variables suggest interesting patterns. For instance, there is no evidence that larger racial and ethnic minority populations drove zoning adoption. Nor did greater threats to public health or conflagration increase the likelihood of zoning. Contrary to Fischel's prediction, zoning was not more common in cities with more spending on roads. Economic factors appear to have played a more important role. Zoning adoption was more likely in cities with higher unemployment and with greater shares of the workforce employed in manufacturing and agriculture. It was also more likely in cities with more renters (particularly in the case of comprehensive and racial zoning). This conclusion is bolstered by a secondary analysis in which I add a measure of renter segregation in 1900 for 42 cities. Where renters were

[68] Cities with reformed institutional structures were not more likely to adopt zoning. In fact, nonpartisan cities were somewhat less likely to adopt. This effect is largely driven by cities in the South where nonpartisan laws may have advantaged Republicans.

more segregated from homeowners, zoning was much more likely to be implemented. This finding suggests that homeowners were more supportive of zoning measures when they lived in more defined neighborhoods to protect. It is also clear that zoning ordinances were much more likely to be enacted in places that had a preference for segregation. Where segregated schools were the law, cities were more likely to adopt zoning. In additional analyses I find that cities with marked segregation at the turn of the Century, particularly in the South, were also more likely to adopt zoning. These results support the contention that zoning was a mechanism used to reinforce existing racial hierarchies. In the next section I provide evidence that this was precisely its effect.

Zoning Generates Segregation

As Chapter 1 revealed, race and class segregation existed prior to the introduction of public policy measures that would separate residents and land uses. The history of private mechanisms producing segregation is well understood (e.g. Jones-Correa 2000, Meyer 2000, Burgess 1994, Myrdal 1944). Blacks, immigrants, and the poor tended to live in areas that were removed from native white middle class residents for a variety of reasons. Rabinowitz (1974) explains, "some of the housing segregation was voluntary: Negroes sought proximity to their jobs, welcomed the freedom from white surveillance, and enjoyed the company of other blacks" (p98). More important was "black poverty, which limited housing options" and "white pressures to keep blacks out of their neighborhoods" (p98). Restrictive covenants, clauses written into property deeds specifying restrictions on the use of the property, were widely used to bar undesirable neighbors from occupying properties starting in the late 1880s (Fogelson 2005). Mortgage discrimination and real estate steering were institutionalized in the early 1900s (Helper 1969). However, Hayward (2013) explains that the problem with relying on black poverty or

restrictive covenants to maintain segregation was that the market was susceptible to encroachment, requiring coordination and constant vigilance against potential violators (Brooks 2002, McAdams 2008). Marshaling the power of municipal governments to restrict land use offered developers and property owners the promise of a protected investment.

Evidence indicates that zoning adopted in the early 1900s followed patterns created by private actors (Burgess 1994, Tretter 2012). Writing in 1929, M. T. Van Hecke explained, "zoning programs are frequently influenced by restrictions in deeds. Where a very substantial area has been set aside for a high type use through the medium of deed restrictions, and that area is sufficiently large and geographically distinctive, zoning officials ordinarily recognize the character of the development and classify that section accordingly, so that the objectives of the statutory and deed restrictions are the same" (p420). Both supporters and opponents of zoning argued that the new laws would simply reinforce patterns produced by the market. Supporters, like Robert Whitten, creator of Atlanta's post-*Buchanan* comprehensive zoning plan, claimed that zoning would serve to lessen racial antagonism and economic loss by making the future of development more predictable as it enforced existing segregation patterns (Toll 1969 p262). Opponents suggested that zoning would add unnecessary (and some argued, unconstitutional) regulation when restrictive covenants were perfectly suited to the job of preserving neighborhoods and property (Virginia Law Review 1928, Ellickson 1973, Hayward 2013 pp118-119, Denzau and Weingast 1982, Berry 2001).

Aside from freezing private decisions in public policy, zoning also had the potential to generate race and class segregation through implementation. Ostensibly, zoning is undertaken in the interest of the city as a whole, but this, "depends entirely upon the way in which the work is done" (Van Hecke 1929, p414). This is because zoning, as an administrative task, requires

innumerable small decisions by municipal officers who may, consciously or unconsciously, bias outcomes toward some groups and away from others. E.T. Hartman (1925) explains, "chief among the problems are the granting or refusal of permits in accordance with the law, the decisions of the board of appeals in appealed cases, and appeals from either or both by interested parties" (p162-163). As is true of any regulation, zoning serves political purposes (Denzau and Weingast 1982). The discretion inherent in applying zoning laws meant that local officials could deny permits to builders who sought to house nonwhite or poor families and/or make exceptions for developers serving white and upper class residents (Bayor 1996, Meyer 2000). Abrams (1955) explains, "those who build for whites can get a modification pro forma. But the moment an unwelcome group appears, the officials stand firm" (p210). Until 1949, the Federal Housing Administration officially encouraged the use of zoning to generate race and class segregation (Stearns 1962). Valuators were instructed that, "the best artificial means of providing protection from adverse influences is through the medium of appropriate and well-drawn zoning ordinances" (Federal Housing Administration 1936, *Underwriting Manual*, Part II paragraph 227). Zoning was understood to protect locations "against declines in value or desirability" (section 306(2)) by preventing the, "infiltration of business and industrial uses, lower class occupancy, and inharmonious racial groups" (paragraph 229).

As Berry (2001) notes, providing evidence of the effects of zoning on segregation has proved challenging because zoning is ubiquitous today.[69] But as the first section of this chapter revealed, in the first decades of the 20th century, zoning adoption was variable. I argue that this variation shows that early zoning adopters became more segregated cities – even accounting for the degree of segregation that existed when zoning laws were adopted. My dependent variables

[69] Berry (2001) takes advantage of the lack of zoning laws in Houston and their presence in Dallas to show that private controls – particularly covenants – produce the same outcomes as zoning laws.

in these analyses are *Change* in the level of *Race* and *Class segregation* between about 1900 and 1970. More specifically, I subtract the level of segregation at the earliest point in my dataset from the 1970 of segregation of non-Hispanic whites and renters. The earliest measures for racial segregation are from 1890, 1900, or 1910. For renter segregation, the earliest measure is 1900 for most cities.[70] As explained in Chapter 1, the segregation of renters is an imperfect measure of class segregation – but it is the only measure that allows me to capture change over time.

My primary independent variables are drawn from the data described for Table 2.1. I expect that racial segregation will be most closely linked to racial zoning and comprehensive zoning (as the historical discussion indicated), while class segregation will be tied to all forms of zoning. In the analysis of racial segregation, my independent variable is a dummy variable noting whether a city adopted either a race based or comprehensive zoning ordinance in the period 1900 and 1930. These *Early Zoning Adopters* are coded 1, and cities that did not adopt racial or comprehensive zoning are coded 0. In the analysis of renter segregation, cities are coded 1 if they adopted any type of zoning ordinance between 1900 and 1930 and zero otherwise. I control for the *Change in City Population* between the earliest point of measurement for each city and 1970. Table 2.2 presents these results.

[70] I have data in 1900 for 49 cities. To increase the number of usable observations, I include the level of renter segregation in 1940 for 14 additional cities. The correlation between renter segregation in 1900 and 1940 is .8676. The results are nearly identical (though less precise) using only the data from 1900.

Table 2.2: Zoning's Effect on Race and Class Segregation

	Change in Racial Segregation 1900-1970		Change in Renter Segregation 1900-1970	
	β	P>|z|	β	P>|z|
Early Zoning Adopter	0.133	0.001	0.036	0.061
Change in City Population	0.000	0.002	0.000	0.000
Constant	0.057	0.103	0.026	0.181
N	88		63	
R^2	0.198		0.222	

Note: OLS Regressions

The results in Table 2.2 are striking – cities that were early adopters of zoning ordinances grew more segregated over the next 50 years compared to cities that were not early adopters. Around 1900, cities that adopted zoning had very similar racial segregation rates to non-adopting cities (0.265 for adopters and 0.287 for non-adopters). By 1970, cities that adopted early zoning ordinances had segregation levels about 10 points higher on average (0.489 compared to 0.390). Zoning also exacerbated renter segregation. Cities that were not early adopters saw about a 4 percentage point increase in renter segregation between 1900 and 1970 compared to an 8 percentage point increase in cities with zoning.

Furthermore, zoning had significant consequences for property value inequality (as its promoters had hoped). To measure property value inequality, I created a *Property Value Gini Index* built from median home values at the census tract level in 1970. Cities in which all census tracts have very similar 1970median home values have a low score on this measure, while cities that witness inequality in property values from neighborhood to neighborhood have a high score. Regressing the property gini on the dummy variable for early zoning adoption, including state fixed effects produces a coefficient of 0.09 (SE=0.003). Cities without early zoning had an average 1970 property gini of 0.04, compared to 0.13 among early zoning adopters. This difference is greater than a standard deviation on the gini index.

Of course, zoning was not the only mechanism available to local governments to promote race and class segregation. One of the most successful strategies of directing residential locations without force was the placement of segregated amenities. Austin, Texas was a pioneer in this practice. The city's 1928 comprehensive zoning plan found that, "the Negroes are present in small numbers, in practically all sections of the city, excepting the area just east of East Avenue and south of the City Cemetery. This area seems to be all Negro population" (page number). So, the plan recommended that, "all facilities and conveniences be provided the negroes in this district, as an incentive to draw the negro population to this area." This strategy would, "eliminate the necessity of duplication of white and black schools, white and black parks, and other duplicate facilities for this area" (Koch and Fowler 1928, p57). Soon after the adoption of the plan, Austin's city council pursued this approach, providing a park, school, and sewer connections for African Americans only in this one section of the city. The council went on to duplicate the strategy for Latinos (Tretter 2012). In the 1940s and 50s (as I discuss in Chapter 4), the siting of segregated public housing followed a similar pattern.

Another tactic cities used to shape minority residential patterns was the use of eminent domain and the placement of public improvements. Abrams (1955) reports, "Sites abutting Negro developments have been acquired for railroad stations, incinerator dumps, urban redevelopment, public housing projects, roads, and similar improvements. These improvements sometimes tend to cut off the minority area from the rest of the city and stem the expansion of its living space" (p212). Such decisions became increasingly frequent as the federal government provided funds for redevelopment. As I show in Chapter 4, cities that spent more urban renewal dollars also became more segregated.

Cities also engaged in several strategies that enhanced/protected private decisions generating segregation. Chief among these was the refusal to deploy police forces to protect blacks from white violence when they sought to buy or rent homes in white neighborhoods. In many places, police routinely prevented the poor and people of color from setting foot in wealthy white areas at all (Meyer 2000, Myrdal 1944).[71] In some places, city governments took actions to aid the effectiveness of private deed restrictions (Hirsch 1983). For example, the mayor of Baltimore established a special Committee on Segregation to help coordinate deed restrictions in white neighborhoods. The committee included the city's building inspector, representatives from the health department, real estate agents, and neighborhood improvement association members (Meyer 2000).

Conclusion

This chapter has provided the first piece of quantitative evidence along with qualitative historical references that suggest that local governments influenced patterns of segregation by taking into consideration public goods provision as well as the wishes of wealthy business elites and white property-owning constituents. Local governments institutionalized prejudicial behavior and promoted segregation through the use of zoning ordinances.

Political elites enacted zoning ordinances in order to control the distribution of public goods in the city. They justified their zoning and segregation legislation with the argument that the poor and minorities had habits that were harmful to public health. One of the main goals of zoning ordinances was to create property values that were stable; this was highly supported by influential groups including home and landowners who did not want "others" settling in their

[71] As was the case with zoning, the use of police to support segregationists was variable. For instance, Meyer (2000) reports several examples of police providing support for black residents in New York City, St Louis, and Baltimore.

areas and decreasing the value of their investments. Local governments had no objections to keeping the property values high and stable, as this allowed them to refrain from raising taxes.

One major consequence that resulted from enacting zoning ordinances was that cities that adopted them early became more segregated in terms of both race and class lines. When cities restricted land use and the location of specific buildings, this created areas that were homogenous, leading to the reinforcement of inequality and social divisions.

In 1917, the Supreme Court ruled that zoning ordinances were indeed unconstitutional. This led many cities to turn their attention to comprehensive city plans and other forms of zoning that did not make outright segregation obvious. New comprehensive city plans were fueled by continuing race and class prejudice, and influenced the long-term shift from racial segregation to segregation by income level.

The historical references presented in this chapter support the argument that local government politicians used zoning as a mechanism to control the distribution of public goods towards their supporters and away from others, as well as create and maintain high property values in their cities. Zoning was an implemented effectively in areas where those in favor of zoning had political power to turn racial and class prejudice into legislation. Cities that were early adopters of zoning ordinances grew to be ten percent more segregated over the following fifty years than did cities that were not early adopters. The results also illustrate that zoning ordinances doubled the amount of renter segregation. In these early adoption cities, property values would also become more unequal by 1970.

Local governments used zoning ordinances as a mechanism to solidify, through institutionalization, existing racial hierarchies and prejudice, and this practice has had long-lasting effects. When cities could have used zoning to enhance the life of all residents, local

government officials catered to the private interests of their supporters and utilized policy tools including the placement of segregated amenities, public improvements, eminent domain, and redevelopment funds to protect and increase property values. The consequence of these practices was the generation of long-standing race and class segregation and prejudice.

Chapter 3: Inequality in Public Goods Provision, 1900-1940

Throughout the first decades of the 20th century, neighborhoods became increasingly homogenous along both race and class lines. By 1940, white/nonwhite segregation had increased by an average of 63%, while renter segregation increased by 54%.[72] Chapter 2 provided evidence that cities pursued race and class segregation in an effort to ensure the protected delivery of public goods to constituents with political power – namely land owners, realtors, developers, and white homeowners. Segregation served this goal because both local public goods and local political representation have a spatial component. While it is difficult to deny particular households access to sewer lines or a local public park, it is much easier to deny particular neighborhoods. Thus, as segregation geography shifted, so too did public goods inequalities.

Nothing about the existence of residential segregation necessitates inequality in service provision; it only makes it easier to produce if it is what city officials prefer to do. In fact, early planning advocates often argued that taking race into account when developing city plans was the key to *protecting* black communities and ensuring that they received, "all necessary municipal services – paving, city water, sewers, electricity, fire, and police protection…" (Knight 1927, p137).[73] While it was clear that public facilities would be separate, some planners insisted that there would be, "equal opportunities and facilities" (Virginia Law Review, 1928, p526). In most places though, inequality was the norm as, "housing segregation…permit[ted] any prejudice on the part of public officials to be freely vented on Negroes without hurting whites" (Myrdal 1944, p618).

[72] As described in detail in Chapter 1, renter segregation remained at lower levels than race segregation throughout this period.
[73] Knight, Charles. 1927. Negro Housing in Certain Virginia Cities, Publications of the University of Virginia Phelps-Stokes Fellowship Papers, Number 8

As Abrams (1955) explains, "though often merged into a single neighborhood, the ghetto was not always a slum nor the slum always a ghetto….the slum-ghetto was created when those of a single ethnic minority group lived not only in a ghetto but also in bad housing" (p76). Local governments contributed to the development of slum-ghettos by providing worse city services to neighborhoods populated predominantly by certain groups. Myrdal (1944) explains that the argument offered in support of these unequal allocations was the (erroneous) belief that whites paid all of the taxes, and so were therefore entitled to all of the benefits. It followed that, "whatever [Negroes] get is a charitable gift for which they should be grateful" (p336).

Over the long run, this pattern of government behavior contributed to the development of negative stereotypes about the people who lived in the slum-ghetto (e.g. that racial minorities or the poor, "*cause[d]* the deterioration of the places in which they live[d]" Hayward 2013, p64, emphasis in original). This is what Glenn Loury (2002) refers to as a "politically consequential cognitive distortion" because the disadvantage observed among a group of people is assumed to be, "intrinsic to that group when, in fact, that disadvantage is the product of a system of social interactions," which then leads observers to be opposed to policy solutions or systemic reform (p26). It was in the early part of the 20th century that the foundation for continuing inequality in the 21st century was laid. By building inequality into the physical landscape, cities added, "unprecedented durability and rigidity to previously fragile and fluid [social] arrangements" (Torres-Rouff 2013, p257).

In Chapter 2, I provided evidence that political power in the hands of opponents could slow or inhibit the enactment of such policies. A similar pattern existed with respect to the distribution of benefits. In many cities, political participation of lower socio-economic status groups and racial minorities limited the degree to which public goods were allocated unequally.

When these groups were able to assert political power through voting strength or in official positions, they received more benefits from municipal governments.

In this chapter, I show that between 1900 and 1940, neighborhoods that were identifiably poor or inhabited by minorities were allocated lower quality services including road paving, public health efforts, and sewer extensions. I draw on detailed data from Atlanta, Birmingham, Baltimore, Boston, Chicago, and Philadelphia to provide this evidence. Where relevant, I discuss mobilization efforts on the part of underserved groups that limited the extent of unequal allocation. I also show that in the case of sewer connections, this inequality persisted into the latter half of the century. Using data from all places included in the Census in 1970, 1980, and 1990, I provide evidence that where minorities and renters were more concentrated (e.g. in more segregated cities) they were less likely to be connected to public sewers.

A common argument promoted in the literature, as early as the 1930s, was that class, not race, was the more important determinant of inequality. A 1932 report commissioned by President Hoover stated, "These conditions of Negro housing in our cities are not the result of any willful inhumanity on the part of our society. On the contrary, they merely emphasize the present shortcomings of our individualistic theory of housing…The Negro's housing problem is part of the general problem of providing enough housing of acceptable standards for the low-income groups in our society" (Johnson 1932, p.viii). Myrdal (1944) also argued that, "in the North there is little, if any, direct discrimination…What inequality there is in the Negro's consumption of public services in the North is due mostly to poverty, lack of education, and other disabilities which he shares with other lower class persons in the region" (p335). Thus, the belief that blacks endured worse conditions than whites solely because of their lower socio-economic status, was widespread. As will be shown throughout this book, this was not true in

either the historical or modern period, regardless of the measures used or the region studied. Race and class exert powerful, independent effects on distributional outcomes.

Jim Crow and Public Goods Inequalities

Until the mid-1950s (and in some places long after), many Southern (and some Northern) cities generated inequalities in public goods by segregating access directly and then underfunding nonwhite services. Of all of the public goods residents sought to secure, none was as important as schooling. As of 1947, all southern states, along with Arizona, Indiana, Kansas, and New Mexico required or allowed segregation of schools (CQ Researcher 1947). Until the mid-1930's, about 75% of public school revenues were completely locally derived (Snyder 1993).[74] In the post-war period state and then later, federal government contributions rose. According to the data described in Chapter 1, localities spent an average of $103 (in 2012 dollars) per capita on schooling in 1902, representing about 35% of total expenditures. Per capita spending rose dramatically over the next 25 years (to $203 in 1927), but not as quickly as other expenditures. In 1927, schooling represented about 31% of local budgets. Until (and in some places even long after) *Brown v. Board of Education* was decided in 1954, racial segregation in schools was generated directly – that is, *residential* segregation was not needed to

[74] Technically, most schools in the United States are governed by approximately 13,000 independent, single purpose governments called school districts, rather than by cities. Not only are the governments that provide schooling and garbage service different entities, with separate budgets and separately elected officials, they do not often share the same boundaries. Today, only about one quarter of cities over 50,000 people have boundaries that are coterminous with a single school district (Fischel 2007). However, the 1902 Census Statistics of Cities reports that, "In most cities [included in the report] the schools are under the control of the city government, or of a school district, practically coterminous with the city" (p21). In his study of modern district boundaries, Fischel (2007) confirms that older cities are much more likely to have coterminous boundaries. It is for this reason that I include a discussion of schooling in this section. The figures cited in this paragraph combine revenue and expenditure for the municipality and the district as reported by the Census. However, it is not proper, even during this early period, to think of expenditures on schooling as being exchangeable with expenditures on other types of services. That is, increasing school spending did not directly impact funds available for policing, although one might imagine a theoretical budget constraint that the voters could impose on all governments. Due to a lack of clarity both theoretically and statistically, for the most part, I do not consider school district revenue and expenditure as part of the municipal budget in the remainder of this book.

ensure that whites and Blacks attended different schools. This was true in both the North and South. As one observer explained, "contrary to the general impression, this doctrine [of segregated schools] is of Northern and not of Southern origin. It originated in fact in the Quaker state of Pennsylvania and the abolitionist state of Massachusetts, and; although it repudiates any implication of a superior and an inferior race and insists on equal opportunities and facilities…" (Virginia Law Review 1928, p526). Litwack (1961) found that, "by the 1830s, statute or custom placed Negro children in separate schools in nearly every northern community" (p115).

In 1912, the Census reported expenditure data on schools separated by race in 40 communities. Unsurprisingly, white schools were better funded than black schools. I estimate that these cities spent about $4 per white resident and about $2.6 per black resident (in 1912 dollars).[75] However, the ratio of spending in black to white schools differed by region. While Northern black schools were not, as the Virginia Law Review implied, equally funded – it was the case that the disparities were greater in the South. For cities in the Midwest, the ratio was 0.846, compared to 0.685 in the Northeast, and 0.573 in the South.[76] School enrollments were also lower among black children. For the 1902-1903 school year, about 56% of black children were enrolled in school in Southern states, compared to 72% of white children (DuBois and Dill 1911, p24).[77] In some places with substantial black populations, no black schools were provided

[75] This is an estimate because I used linear interpolation to estimate the total white and Negro population in each city in 1912. The figure represents the total amount of funding for white and Negro schools reported by the Census divided by my population estimates.

[76] It is important to note that these data only represent a fraction of the communities with black schools or significant numbers of black school aged children (see discussion on page 122 in Financial Statistics of Cities Having a Population of Over 30,000: 1912). The 40 communities included in this special Census report spent less overall on schooling compared to other communities (about $3.6 per capita vs. $4.8 per capita). Compared to data reported in DuBois and Dill (1911), these figures appear to understate the discrepancy in funding between black and white schools.

[77] W.E. Burghardt DuBois, PhD and Augustus Granville Dill A.M., editors, The Common School and the Negro American: Report of a Social Study Made Under the Direction of Atlanta University, No. 16.

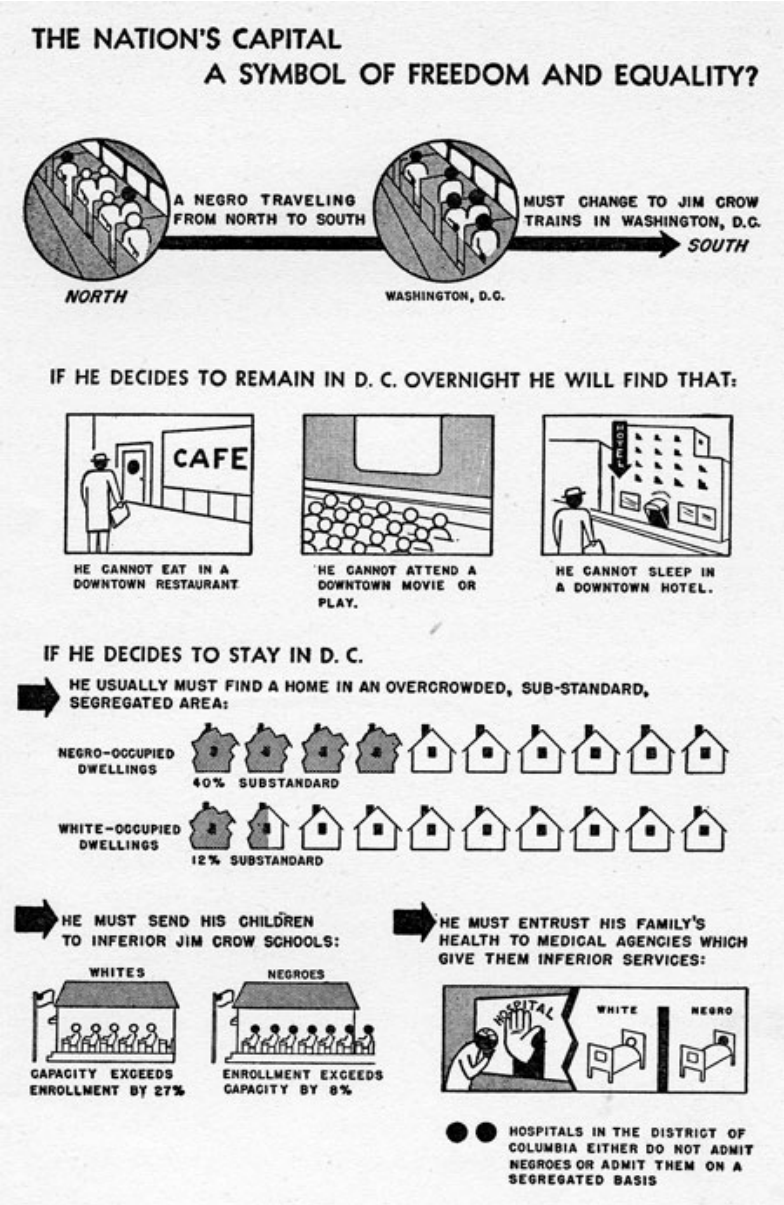
at all (Dubois and Dill 1911). Indeed, as Rabinowitz (1978) has argued, segregated schools actually represented an improvement in many communities because the alternative was complete exclusion – not integration.

Black schools had fewer teachers per child, shorter school years, and inferior physical infrastructure (DuBois and Dill 1911, Myrdal 1944). Teacher pay also differed substantially. For instance, in 1908 Georgia, the average teacher salary for whites was $45.47 compared to $26.37 for blacks (DuBois and Dill 1911). Despite similarly sized populations of white and black school children, Atlanta provided only 15 black grammar schools in 1920 compared to more than 40 grammar schools for white children. But not all white schools were treated equally. Schools serving poor whites (largely immigrants) were also, "older, less well equipped and often more overcrowded" (Myrdal 1944, p338).

Everywhere, blacks paid property taxes that were used to support white schools. Myrdal (1944) explains, "whenever the proportion of Negroes in the population is high, and the standard of Negro schools is kept well below that of white schools, the white educational system can derive substantial gains from segregation. Segregation makes discrimination possible; discrimination means lower expenditures for Negro schools, and the white population thus gets a vested interest in separation" (p341). In 1917, the Negro-at-Large series sought to catalogue reasons for the increasing Northern migration among Southern Blacks. The results of the organization's survey were printed in the Atlanta Independent. The third most important reason (after unhappiness with Jim Crow laws and disenfranchisement) dealt with inequality in school funding. The survey stated, "At present Negroes pay their proportion of taxes directly and a big portion in-directly through their rents, yet Negro schools receive in some cases less than 30 per cent of their just desserts" (reported in West 1976, p14).

However, the extent of inequality differed from place to place. DuBois and Dill (1911) report that in Washington D.C., where blacks sat on the Board of Education and held an assistant superintendent position, "there is no discrimination in the pay of teachers or in the requirements for teachers or in the course of study laid down" (p32). St. Louis and Baltimore both offered black high schools during this period. A 1954 study of inequality in education funding in St. Louis found that black schools were underfunded given their enrollment, but the difference was only about 5% and teacher pay was nearly identical (Russell 1954). In Atlanta, an active chapter of the NAACP sought to mobilize black voting power to improve public services in general and schooling in particular. In spite of a series of restrictions on voting (e.g. the white primary, poll taxes, etc.), the organization was able to register enough blacks to vote to sway some elections (Bacote 1955). In 1919, black Atlantans organized to defeat a bond package that would have solely funded white schools. So, in 1921 sponsors of the referendum sought black support in exchange for a black high school (West 1976).

Schools were not the only public good that was segregated directly during this period. Recreational facilities like parks, swimming pools, bath houses, and golf courses were also designated for white use only in many Southern cities. In Atlanta, blacks had three recreational sites compared to 22 for whites (Kruse 2005, p75). In 1954, The Atlanta Urban League calculated that whites had access to one acre of park land for every 155 residents compared to one acre of park land per every 1020 black residents. As a result, black parks witnessed severe overcrowding and much more rapid degradation (Kruse 2005). Myrdal (1944) writes, "virtually the whole range of…publicly administered facilities…are much poorer for Negroes than for whites" (p335). A graphic from President Truman's Report of the President's Committee on Civil Rights (Wilson 1947) makes the point visibly:



Although Jim Crow legislation was efficient at producing racial inequality, it was not perfect. As the Truman Report explained, "Following the *Plessy* decision, the Supreme Court for many years enforced with a degree of leniency the rule that segregated facilities must be equal. Gradually, however, the Court became stricter about requiring a show of equality"

(Wilson 1947, p82). Separate-but-equal facilities increased costs dramatically (Myrdal 1944). Additionally, some public goods could not be segregated directly. Troesken (2004) argues that, "because most cities and towns installed their water and sewer systems before 1920, during an era of relatively low residential segregation, it was difficult to construct systems that underserved African Americans without also underserving whites" (p91). As a result, he finds that the delivery of clean water and sewage disposal had a dramatic effect on lowering black mortality in the South. Furthermore, in some places, white public opinion had already begun to develop in opposition to overt racial prejudice and blacks were able to make headway in pursuing integration. Boston desegregated its schools in 1855 after sustained protest by blacks and abolitionist whites (Mabee 1968). By 1947, eighteen states had enacted antidiscrimination legislation prohibiting direct segregation (Konvitz 1947). Even some Southern cities (e.g. Atlanta) witnessed a significant local voice in opposition to Jim Crow (Kruse 2005). As direct segregation became untenable and the black population of these cities expanded, residential segregation became the obvious solution. Furthermore, unlike Jim Crow legislation, residential segregation permitted the separation of poor residents from wealthy residents in addition to the separation of residents of color.

Inequalities Generated Through Residential Segregation

When the nonwhite or poor community was segregated residentially, systematic denial of services was possible. A mid-century analysis of "American Negro, Puerto Rican, and Mexican" housing in large cities found that,

> "Garbage collections, building inspections, street maintenance, and other city services are less satisfactory than in other areas. The abnormal number of rat bites in Harlem, for example, may be ascribed not only to proper upkeep but to the ready supply of uncollected garbage in the streets. Southern cities and some in the North omit street paving and sidewalks in Negro sections. In hills sections the residents try to fill gullies in

> the streets with broken masonry, worn-out linoleum, and other trash" (Abrams 1955, p74-75).

In Birmingham, a committee of Black professionals protested the city's 1923 segregation ordinance saying that while blacks "would prefer to live to themselves," black neighborhoods, "are without the necessary sanitary arrangements, street improvements, lights, police protections, and the necessary comforts given other people in the municipality" (Connerly 2005, p44).

Among the most ambitious and expensive public goods that cities developed in the first decades of the 20th century were the delivery of clean water and removal of waste through sewer systems. Sewer and water mains were built along major roads, and homes located along these lines would have had the opportunity to be connected to the system. Troesken (2004) suggests, in a detailed analysis of Savannah and Memphis, that it appears that segregation, "facilitated efforts to underprovide African Americans with sewer and water systems" (p91). I build on Troesken's case studies by analyzing sewer and water extensions over time in four cities: Baltimore, Boston, Chicago, and Philadelphia. These cities all witnessed increases in racial and renter segregation between 1900 and 1940 and had data available on sewer construction.

To measure segregation, I calculated the *H* Index (as described in Chapter 1) for Baltimore, Boston, Chicago, and Philadelphia using ward-level demographic data from the 1900, 1910, 1920, 1930, and 1940 Censuses of Population and Housing.[78] For racial segregation, I use whites and nonwhites as the groups in the calculation of the measure. For class segregation, I use renters and homeowners. Table 3.1 shows each city's *H* index in 1900 and 1940 measuring white/nonwhite segregation and renter/homeowner segregation.

[78] In order to make these scores comparable to modern data, I adjust the scores using a correction factor to make the ward-level estimates similar to the tract-level estimates used in later decades.

Table 3.1: Segregation Increased in the early 20th C					
	Race			Class	
	1900	1940		1900	1940
Baltimore	0.43	0.60		0.07	0.12
Boston	0.33	0.52		0.09	0.11
Chicago	0.46	0.84		0.09	0.15
Philadelphia	0.29	0.44		0.04	0.09

If the argument that I have presented is correct, it should be the case that nonwhite and renter households should have been less likely to have access to water and sewer connections in more segregated cities. Unfortunately, I do not have the individual-level data to test this hypothesis. However, there are also aggregate implications of my theory. If elected officials were taking demographics into account when making decisions about where to build sewer extensions, we should we witness an interactive effect between segregation and the demographics of a neighborhood. As segregation increases, it should be the case that the share of residents who are nonwhite or renters should have a more powerful negative effect on new sewer extensions.

The data I use for this analysis were provided by the Center for Population Economics at the University of Chicago in the Historical Urban Ecological dataset (which is really a collection of many different datasets and maps). The dataset (Costa and Fogel 2015) includes ward boundaries for the four cities listed above between 1900 and 1930 and also includes a map of each city's sewer system. The sewer map includes the year different segments of the system were built. Using ArcGIS, I created counts of sewer segments in each decade for each ward and combined these counts with ward-level data from the Census of Population and Housing.

Observations are arranged by ward-census year. That is, each observation represents one ward in a city in a single year. The dependent variable in the analysis is the *Total New Segments*

built in each ward before the next census. The key independent variables are the share of each ward's total population that is *Black* and the share of occupied housing units that were *Rented* (as opposed to owned). These demographic variables are interacted with each city's *H index of segregation* (for race and class respectively) in a given Census year.

I control for the *Total New Segments* built in the city in each decade to account for the slackening pace of sewer development over time. I include the *Total Segments* built in the ward at the completion of the sewer system to account for the variation in sewer needs across wards. I also control for the proportion of those total segments that were built at the beginning of each decade in the variable *Percent Built*. Finally, I account for the share of the ward population that is *Foreign Born* to account for the possibility that city governments were providing fewer benefits to immigrant neighborhoods (which would have correlated with renter neighborhoods).

An important alternative (and undoubtedly true) explanation to rule out is that black and renting residents chose housing that lacked public services because it was less expensive. I do this by taking advantage of time. I explore the pattern of sewer line extensions in each decade between 1900 and 1940 given the racial makeup of each ward at the beginning of the decade. For instance, the total number of extensions built between 1900 and 1910 is regressed on the share of the ward that was black and the share that were renters in 1900. Because the dependent variable is a count of sewer segments, I fit a Poisson regression.

I was able to obtain data at the ward-level detailing racial makeup for every decade between 1900 and 1940, but data on renters is only available for 1900 and 1940. Because ward boundaries changed dramatically in some cities between these years, interpolation is not possible. Additionally, the Census did not tabulate data on renters in 1940 for the city of Chicago. As a result, adding the proportion of renters to the models significantly decreases the

number of observations. For this reason, I present the model without the inclusion of renters in the first model, and with the proportion of renters in the second.

The results, presented in Table 3.2, reveal a powerful negative relationship between the share of the ward that was black or renting and new sewer extensions in more segregated cities.

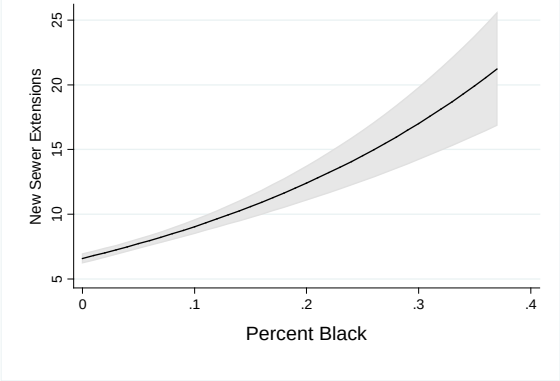
Table 3.2: Segregation Decreased Access to Sewers for Blacks & Renters

	β	Std. Error	P>|t|	β	Std. Error	P>|t|
% Black*Racial Segregation	-21.643	1.347	0.000	-11.811	2.002	0.000
% Black	9.429	0.676	0.000	6.713	0.925	0.000
Racial Segregation	1.874	0.082	0.000	-4.645	0.424	0.000
% Renters*Renter Segregation				-48.256	8.570	0.000
% Renters				3.654	0.765	0.000
Renter Segregation				58.505	6.510	0.000
Total New Segments	0.000	0.000	0.000	0.001	0.000	0.000
Total Segments	0.000	0.000	0.000	0.000	0.000	0.000
% Built	-3.275	0.044	0.000	-2.740	0.062	0.000
% Foreign Born	0.074	0.097	0.442	-0.411	0.198	0.038
Constant	2.611	0.048	0.000	0.651	0.521	0.211
N	541			271		
Pseudo R^2	0.788			0.748		

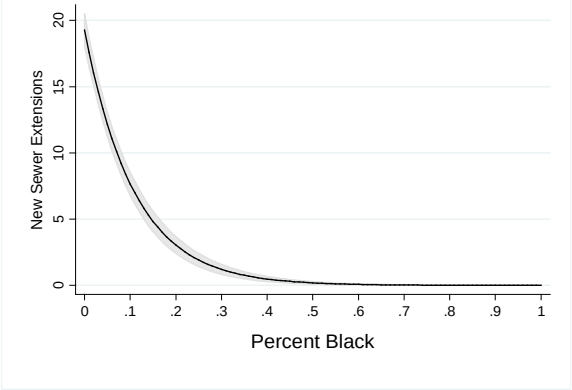
The data indicate that in more segregated cities, heavily black and renter wards were unlikely to receive new sewer lines. Figure 3.2 plots the predicted number of new sewer segments across the full range of black and renter population shares for the least and most segregated city-years in the dataset. The graph in the top right makes clear that majority black wards see no additional investment in their sewer systems. A similar pattern exists for wards with increasingly large renter populations in cities that were segregated by class.

Figure 3.2: Predicted Sewer Extensions at the Minimum and Maximum Level of Segregation

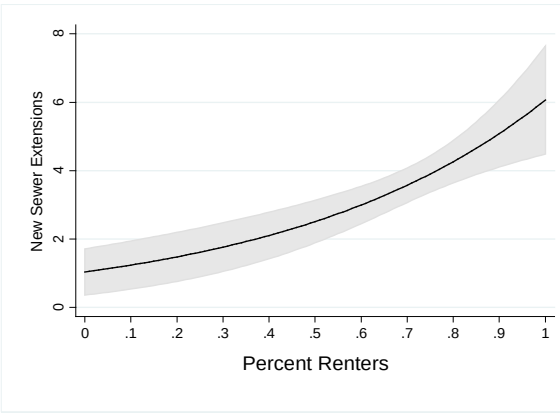
Minimum Racial Segregation (0.29)



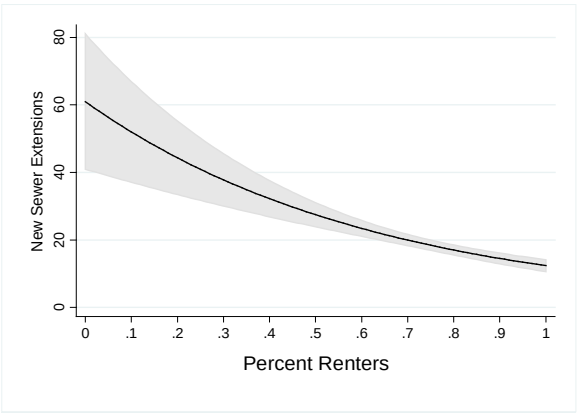
Maximum Racial Segrgation (0.86)



Minimum Renter Segregation (0.04)



Maximum Renter Segrgation (0.11)



In integrated cities however, the reverse is true: larger black and renting populations increase sewer line extensions. This may seem puzzling at first glance – but it is not. Troesken (2004) explains that the reason for this apparent generosity was self-preservation. He says:

> …discrimination in this arena was costly to white politicians and voters in at least three ways. First, given the networked structure of these systems it was difficult to deny service to African-American households and neighborhoods without also denying service to white households and neighborhoods…. Second, in a world where blacks and whites lived in close proximity, 'sewers for everyone' was an aesthetically sound strategy. Third, failing to install water and sewer mains in black neighborhoods increased the risk of diseases spreading from black neighborhoods to white ones (p9-10).

As a result, to the extent that sewer systems were built prior to rising segregation, variation in sewer system service did not disproportionately affect any demographic group. In Richmond, Virginia, neighborhood segregation actually declined between 1890 and 1930, and one contemporary observer wrote, "With the completion of the 1925 program practically the whole of Richmond was sewered and supplied with city water" (Knight 1927, p51).

In other cities, organized political action on the part of nonwhites and the poor mitigated inequalities. Bond passage in Atlanta required approval of two-thirds of votes cast and the two-thirds majority had to constitute a majority of registered voters – so by simply registering and not turning out, African Americans could ensure defeat at the polls (West 1976, Bayor 1996). In 1919, Black voters defeated a one-million-dollar bond package that was to provide, "for improvement of waterworks, a motorized fire department, erection of a museum at cyclorama, and the construction of a crematory with electricity generating facilities," after being told that, "blacks would receive no benefits from the measures" (West 1976, p13). When a new package was submitted to voters in 1921, it included $2,850,000 for water works and $750,000 for the viaduct (Atlanta Independent, February 24, 1921, p4). The mayor promised to appoint a special commission of colored citizens to advise the Bond Commission regarding the distribution of the

funds (Atlanta Independent, February 24, 1921, p4). On election day, Atlanta's "colored citizens…voted for every improvement named on the ballot" (Atlanta Independent, March 10, 1921, p4).

In some cities, sewers were built at the behest of property owners and developers. This was the situation in Birmingham and Los Angeles. In cities with this type of process, land-owners played a crucial role in the eventual sewer map. Because very few land owners were people of color, blacks in Birmingham and Mexicans and Chinese residents in Los Angeles lacked the opportunity to request sewer extensions or connections. While it might seem reasonable to explain inequality in access as the result of these economic differences, cities had other means by which to compel development. In Birmingham, sanitation and building codes were ignored in black neighborhoods (Connerly 2005), and in Los Angeles the city council ordered sewers to be built at the, "cost and expense of the several parties owning property along its route." However, they declined to compel sewer building in Sonoratown or Chinatown (Torres-Rouff 2013, p224; quoting Los Angeles City Council minutes, April 4, 1873). Because most Mexican and Chinese residents were renters, this refusal was a significant benefit extended to their landlords. As a result, in both cities, the absence of sewer and water service was concentrated in minority neighborhoods.

In this next section, I ask whether this unequal pattern of sewer development continued to affect minority and renting residents in the latter half of the 20th century. In order to investigate this question, I draw on the GeoLytics Neighborhood Change Database which matches and normalizes Census tract boundaries between 1970 and 1990. This normalization allows for direct comparison of tract attributes across time. I use this database to construct the race and

renter *H* index (as described in the previous section) for 4,566 incorporated municipalities and 800 unincorporated county areas.

The dependent variable in my analysis is the share of housing units in a given census tract that is connected to *Public Sewers*. My primary independent variables, similar to the previous analysis, are the share of the tract population that is *Nonwhite*, and the share of households that are *Renters*. These variables are interacted with each city's *H* index *of segregation* (for race and renters respectively) in each year. I control for the proportion of *Wealthy Families* in the tract (those earning incomes above the 90th percentile for a given Census year: $15,000 in 1970, $35,000 in 1980, $75,000 in 1990), the total *City Population*, and the total number of families connected to *Public Sewers* in the city. I include fixed effects for region and cluster the errors by city. The results are presented in Table 3.3 (summary statistics are in table A3.2).

Table 3.3: Nonwhite and Renter Sewer Access in Segregated Cities

	β	Std. Error	P>|t|
% Nonwhite*Racial Segregation	-0.261	0.069	0.000
% Nonwhite	0.164	0.037	0.000
Racial Segregation	0.122	0.035	0.000
% Renters*Renter Segregation	-2.643	0.854	0.002
% Renters	0.851	0.228	0.000
Renter Segregation	1.631	0.418	0.000
% Wealthy	0.254	0.105	0.016
City Population	0.000	0.000	0.000
City Public Sewer Connections	0.000	0.000	0.000
Midwest	0.053	0.013	0.000
South	-0.040	0.012	0.001
West	0.017	0.012	0.171
Constant	0.327	0.161	0.042
N	146,102		
R^2	0.327		

As was the case in the early period, between 1970 and 1990 renters and nonwhite residents continued to have inferior sewer access in more segregated cities. Of course today, overall sewer

access is high; the median census tract has 97% of homes connected to public sewers. The point demonstrated by this analysis is that both in the past and today, lack of access to public sewers is disproportionately concentrated among minority and renting residents.

Delivery of other public goods followed a similar pattern to sewer development and clean water provision. In 1900, 8,000 automobiles were registered in the United States; by 1940 the figure was 27.5 million (Federal Highway Administration 1997). But during this same period, actual spending on roads increased very little and dropped as a share of total budgets.[79] This meant that road paving distribution was an intensely political decision and different areas of the city were treated differently. One study of four Virginia cities reported, "a general lack of paving in the Negro residential areas" (Knight 1927, p53). In Los Angeles, Torres-Rouff (2013) explains, "many paved streets ran through the Anglo residential neighborhoods and commercial center but abruptly yielded to dirt as soon as they crossed into Sonoratown and Chinatown" (p226). A 1958 study of Birmingham analyzed white and black blocks in a single working class neighborhood and found that about a third of the black blocks had unpaved streets on three or four sides compared to only 6% of white blocks (Connerly 2005, p31).

As described in the introduction, mortality rates in cities during this time period, particularly the early years, were high. A budding public health movement sought to utilize government funds to address disease contraction and death. Cities created new public health departments, passed regulations regarding the storage and transport of milk, sent inspectors to stores and dairies, and engaged in large scale fumigation efforts. In all of these activities, white and homeowner neighborhoods were treated more protectively than neighborhoods inhabited by

[79] In a sample of 84 cities for which I was able to obtain data between 1902 and 1937, mean per capita road spending was $44 in 1902 (in 1912 dollars) and $43 in 1937. It reached a high of $51 in 1932. Road spending represented about 13% of city budgets in 1902 and about 8% in 1937.

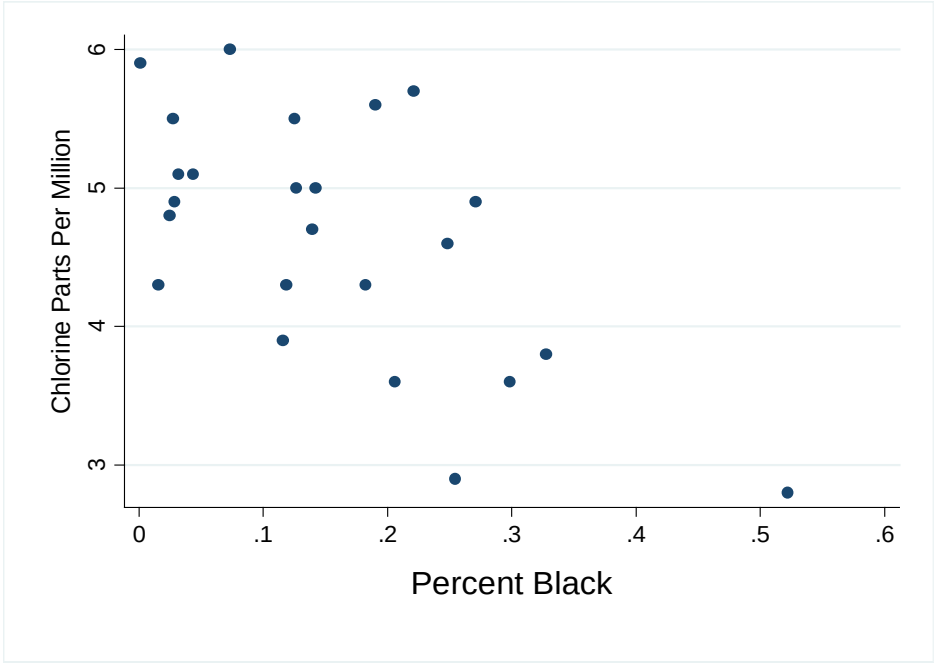
renters and minorities. In 1915, the nationwide infant mortality rate was 57% higher among nonwhites than whites. One study of 4 southern cities determined that nearly 1 of every 2 black babies died (Meckel 1990 p.142). Even still, black infants were "almost entirely" excluded from the "early part of the infant welfare campaign," (Meckel 1990, p142).

A 1914 analysis of Baltimore's Public Health department by the United States Surgeon General found that regulations were not enforced in the poorer parts of town. The report explained:

> An inspection was made by me of the stores selling milk in two of the districts of the city. One was located on the outskirts of the city in a good neighborhood…In every store the milk was sold in unbroken packages, was kept in a separate compartment of a large refrigerator and the conditions were as good as could be expected…The other district visited was of a different type altogether. It was located in the slums, among the foreign population. Here all the milk was sold in bulk under the most insanitary conditions. To make regulations here is practically hopeless. There are but three things to be done – stop the sale of milk in such places, establish a municipally controlled dairy within the district, or prohibit the sale of anything but bottled milk in original packages… (Fox 1914, p37).

In 1901, the Baltimore Health Department (reported in HUE dataset by Costa and Fogel 2015) reported an assessment of water quality in each ward. Only one ward had water that was classified as "Very Muddy" (as opposed to clear, fairly clear, cloudy, or muddy). That one ward was 52% black. The same ward also had the lowest level of chlorination in the entire city. In fact, there was a powerful negative relationship between chlorine parts per million and the share of black residents in a ward. Figure 3.3 provides a scatter plot of the data.

Figure 3.3: Chlorination of Water in Baltimore Wards, 1901



Not only were services provided differentially, but many cities engaged in a practice Rabin (1990) calls expulsive zoning: the placing of negative uses in minority neighborhoods. Kruse (2005) explains that as neighborhoods transitioned from white to black, city officials would assume that property values would fall and the area would become a slum. "Accordingly, planners and zoning committees lowered their standards for the region and began approving projects they would have routinely rejected if the residents were still white" (Kruse 2005, p74). A 1932 analysis of housing in one New Orleans neighborhood reported that, "The superintendent of the public school system used to live in this area but the white residents began to move out and then the city built a garbage incinerator over here, and all of the best whites moved out and the Negroes moved in with the poor whites," (Johnson 1932, p19). In Birmingham, city planners zoned black neighborhoods in flood plains and in industrial areas (Connerly 2005). Myrdal

(1944) reports that it was common to ignore criminal activity in black areas. As Muhammad (2010) explains, municipal authorities allowed crime to flourish in black neighborhoods as a service to white politicians and constituents. Doing so allowed whites access to prostitution, gambling, illicit alcohol and drugs while protecting white neighborhoods from the criminality. Because such operations were, "mostly owned, partially operated, and unofficially regulated by a largely white power structure" (Muhammad 2010 p.227), the benefits were captured by whites, while the negative externalities of vice were borne nearly exclusively by blacks. These strategies created conditions that lead later generations of planners to denote black areas as blighted slums, thus enabling the expulsion of blacks from these neighborhoods in redevelopment projects.

The historical record indicates that lower levels of segregation and more political power in the hands of blacks and the poor could mitigate such inequalities. Throughout the late 1880s, blacks held significant bargaining power in Atlanta city politics. Blacks were appointed to the nominating committees for city elected offices, and black votes were courted with promises of a black fire company, schools for black children, and street paving (Bacote 1955). After the white primary was struck down in 1946, blacks gained even more leverage in Atlanta politics. Black leaders had been pressing the city government for years to hire black police officers, "hoping to solve the problems caused by both the absence and the presence of white policemen" (Kruse 2005, p33), but their requests were ignored until they could marshal votes in city elections. In 1948, eight black patrolmen were hired (although they were only allowed to patrol black neighborhoods and could not arrest whites).

In Birmingham, many black neighborhoods formed active, dues-paying, civic leagues to lobby the city government for improved services. While they won a few small victories (the first city-owned park for blacks, some street paving and lighting, fire hydrant installation, sewer

extensions, and gas lines), they were mostly met with staunch resistance from the all-white government. One organization, the Harriman Park Civic League waited for four months to get an appointment with the public safety commissioner, Bull Connor. When the meeting finally occurred, Connor literally turned his back on the presentation (Connerly 2005, p221). In the late 1960s and early 1970s, as political power began to shift toward black residents, many of the requests brought by the civic leagues were finally addressed.

In Boston, Progressive Reformers attracted public support and won a series of institutional reforms between 1903 and 1913. Nonpartisan neighborhood organizations arose as powerful voices in municipal politics. The result was the consolidation of political power in the hands of middle-class homeowners (Connolly 2009) at the expense of working-class white ethnic immigrant constituencies like the Irish. However, the city was fairly integrated residentially along both ethnic and class lines during these years – and so, while political power shifted hands and the agenda changed, when neighborhoods won improvements like street cleaning and repair, playgrounds, libraries, or improved police protection, they benefitted all residents in the community, not just those with political power.[80]

Between 1914 and 1950, Boston was governed (on and off) by a staunch advocate of the poor and working classes – James Michael Curley. Curley was a machine-style politician, who was never able to consolidate a dominant citywide organization (Erie 1988). Many histories of this period note Curley's lavish attention to the city's, "working-class, ethnic neighborhoods" (Connolly 2009, p146). But the Census data from the period reveal that even the most heavily ethnic wards were actually fairly mixed. In 1930 for instance, wards ranged from 21% foreign

[80] Connolly (2009) argues that this shift in political power altered the agenda of city politics toward neighborhood improvement and away from issues that the working class prioritized like union protections and wage and pension increases (see pages 115-120) and also decreased participation among working-class voters.

born to 42%, and no ward housed more than 11% of the total foreign born population. So when Curley "ordered loans to clean and pave local streets, build a playground and bathhouse, and improve sewer and water serves" (Connolly 2009, p166) in the North End in order to woo Italian votes, non-Italian residents also benefitted.[81]

Yet, in many cities, even when residents and activists mobilized to lessen inequalities, "segregation [became] the cornerstone of the elaborate structure of discrimination against some American citizens," (Wilson 1947). Hayward (2013) explains that the, "black ghetto [was] subjected to systematic disinvestment, while collective investments in new residential and commercial structures, and in 'public amenities', such as parks and athletic facilities and well-built and well-equipped schools, disproportionately [were] channeled to places that were, first legally, then practically, restricted to those constructed as white" (p63). These inequalities contributed to a growing collective sense of whiteness and homeowner identity on the one hand (Sugrue 1996, Hayward 2013), and on the other hand, the hardening of stereotypes about the suitability of poor and nonwhite residents as neighbors. White homeowners believed that individuals who shared demographic characteristics with those who lived in disinvested neighborhoods would bring slum conditions with them wherever they lived. In 1951 and 1953, Rose Helper conducted 40 interviews with real estate agents in New York City and Chicago to learn about the, "reasons for excluding Negroes from white residential areas" (Helper 1969 p18). She reported that the agents believed that, "[white people] fear that their neighborhood will deteriorate if Negroes come because of their manner of living in other areas: they associate Negroes with the undesirable slum (dirt, noise, squalor, stealing, vice), something to be avoided

[81] One scholar (Puleo 1994) estimates that in 1920, 95% of the North End population was Italian (p116). Without detailed data regarding the exact location of Curley's benefits, it is impossible to know the degree to which they served other populations.

if possible" (p79). In response, white homeowners sought continued governmental protection of their neighborhoods. Over the next several decades they succeeded in this fight.

Conclusion

Between 1900 and 1940, America's cities became increasingly segregated along race and class lines. While renters and homeowners both became more concentrated, the most dramatic changes in segregation occurred between blacks and whites. These changes in residential living patterns changed the distribution of public goods. As cities became modern service providers, the allocation of public goods was intensely political. In the earliest years when no neighborhoods benefitted from paved streets or clean water, health and cleanliness did not differ dramatically from place to place. But as streets became sewered, paved, and lit, and as inspectors enforced building, sanitation, and health codes, some neighborhoods reaped the benefits while others, "continued to contend with dirt roads and open cesspools" (Torres-Rouff 2013, p227). As Torres-Rouff (2013) explains, "these decisions produced a city that physically imposed inequality on its citizens" (p227). Such choices would be consequential for the future as inhabitants of these neighborhoods came to be associated with poor living conditions. Today, evidence indicates that segregation is maintained by white homeowners' willingness and ability to pay a premium to live among white, educated neighbors (Cutler, Glaeser, and Vigdor 1999).

Chapter 4: City policy maintains/deepens segregation, 1940-1970

By 1940, segregation patterns in cities were well-established. The boundaries of minority neighborhoods were clearly defined and white prejudice against nonwhite neighbors was entrenched. As one Chicago realtor explained, our "firm has a policy where they won't sell to a Negro in an area where Negroes are not resident…the general public…is not willing to accept the Negro as a neighbor. That's the basis for our not selling to Negroes in this type of an area unless one Negro family is already in the block. You can't be censured then. A silly idea but that's life" (Helper 1969, p41).

The maintenance of property values was the typical explanation offered for these practices; a belief that had been cultivated by policies enacted by local governments and which quickly became a self-fulfilling prophecy. Blacks were seen as undesirable *neighbors* because the features of their *neighborhoods* became associated with individual members of the racial group. Whites came to similar conclusions about Chinese residents in San Francisco (Shah 2001, McWilliams 1964) and Latinos throughout the Southwest (Abrams 1955, Torres-Rouff 2013, McWilliams 1964). This was the case despite the fact that minorities and renters experienced poor neighborhood quality because of paltry municipal services, neglectful landlords, and the overcrowding that resulted from segregation, not from their own doing.

During the build-up of the war effort in the early 1940s, massive demographic changes rippled through the nation. African Americans moved to the North and West, and the war and agricultural industries attracted Latinos to cities and farms in the Southwest (Weaver 1948, McWilliams 1964). In the post-war period, city governments utilized policy instruments like urban renewal and the placement of public housing to prevent minority and poor neighborhoods from expanding into white areas, and to protect property values for white homeowners. At the

same time, tumultuous battles over racial integration (of neighborhoods, schools, busses, lunch counters, unions, etc.), the rising Civil Rights movement, and the passage of the Voting Rights Act, threatened to undermine white homeowners' control of the political system, distribution of city services, and ability to police the borders of their neighborhoods (Sugrue 1996, Kruse 2005, Self 2003).

A great deal of insightful, detailed historical research studying the Civil Rights movement, segregation, and suburbanization has been written about the postwar period and this chapter does not attempt to retell what we already know. Instead, here and also in Chapter 5, I focus on the role of city policy in the generation of neighborhood segregation and suburbanization. An important contribution of these chapters is to explore why, if the drivers of segregation and suburbanization are similar, do white homeowners choose one avenue of separation over another? I argue that policy control plays an essential role. When white homeowners lost the power to adequately guard their neighborhoods and dictate municipal policy and public goods distribution, suburbanization became attractive. First, I show that urban renewal was linked to increased race and class segregation in the postwar period. Then, I demonstrate that whites in racially segregated cities witnessed increasing threats to their political power, both electorally and more specifically, with regard to housing policy.

Urban Renewal and Segregation

In 1932, more than 80% of local revenues came from property taxes (Census of Governments Finance File). By the end of that year, nearly 750 homes were foreclosed every day (Gotham 2000). City government revenue plummeted. Mayors sought relief from Congress; organizing as the National Conference of Mayors and testifying in hearing after hearing about the dire need for federal subsidy (Ogorzalek, forthcoming). As part of its

response, Congress enacted housing legislation. With its first foray into this area, the 1934 Housing Act and establishment of the Federal Housing Administration (FHA), Congress had multiple goals –the reemployment of the construction industry, the shoring up of the financial sector, and the stimulation of home ownership. But these policies were *also* spurred by a commitment to residential segregation. As Gotham (2000) details, the major authors of the proposals under consideration were, "leading officials in the real estate and lending industries" (p303), most of whom, by this time, had come to view race and class segregation as a stabilizer of property values and therefore, made them a conscious goal of these policies. Thus, it should not be surprising that the FHA played a major role in the institutionalization of suburban segregation (Gelfand 1975, Jackson 1985, Massey and Denton 1993).

However, the next piece of housing legislation, enacted in 1937 as the Wagner-Steagall Housing Act, was a conscious turn *away* from these forces. The Wagner Act sought to, "provide financial assistance to the States and political subdivisions thereof for the elimination of unsafe and insanitary housing conditions, for the eradication of slums, for the provision of decent, safe, and sanitary dwellings for families of low income, and for the reduction of unemployment and the stimulation of business activity" (Wagner-Steagall Act 1937). To achieve these goals, the act established the United States Housing Authority (USHA) to, "make grants and loans to local public housing authorities, to enable them to build, own, and operate housing projects for families of low income," and importantly, to clear slums (Robbins 1937, p4). As such, the Wagner Act served as the first Congressional effort to assist in what is now commonly referred to as "urban renewal" – local efforts to address the ravages of time, revitalizing the "urban built environment" (Avila and Rose 2009, p339).

Whereas the establishment of the FHA and passage of the 1934 Housing Act were aimed at assisting those who *could* afford housing in the private market, the Wagner-Stegall Act sought to, "provide decent, safe and sanitary housing for that large group of our population who [could not] afford to pay enough to cause private capital to supply their housing needs" (Brabner-Smith 1937, p681). In addition to focusing on low-income residents, the Wagner Act also understood that, "any realistic approach to clearing slums and rehousing low income families would necessarily include a large number of Negroes as tenants" (Weaver 1940, p150). Thus, the USHA included an Office of Race Relations directed by an African American, Harvard-trained economist, Dr. Robert C. Weaver (Meyer 2000).[82] Weaver's office was charged with reviewing applications for federal funds to ensure that, "sound racial policy may be reflected in all projects" (Weaver 1940, p155). In a 1968 interview, Weaver recalled:

> The Public Housing Program was perhaps one of the outstanding examples of equity of treatment as between white and black Americans….In public housing we not only got approximately a third, as I recall, at one time of the units available to nonwhites--most of them were Negroes--we also got Negro managers, which was unheard of in places like Atlanta and Memphis and Jacksonville and in Miami. We were able in the North to get projects which were open to both Negroes and whites. This required some doing as early as 1937 to '38. These were the exceptions rather than the rules but they did occur. (Weaver Oral History 1968, p9)[83]

Reviewing Dr. Weaver's tenure, *The Crisis* (the official publication of the NAACP) reported, "As a result of his efforts and the support of USHA officials, a more fair and equitable racial policy now exists in USHA than in any other branch of the Federal Government. On the basis of need, Negroes are enjoying equitable benefits from public housing…" (October 1940, p319).

[82] Dr. Weaver was the first African American to earn an Economics PhD at Harvard. He went on to serve as the first black cabinet member as the Secretary of Housing and Urban Development.
[83] Available at http://transition.lbjlibrary.org/files/original/6404ca478ed6c3848eedaaf380acdb45.pdf

However, despite the fact that, "The United States Housing Authority…tried to set…desirable precedents in the field of practical racial relations" (Weaver 1940, p155), the seeds of segregation were embedded in the design of urban renewal; planted by the coalition that brought it to fruition.

The first of these seeds was local control. J. W. Brabner-Smith, Counsel for the Federal Housing Administration explained in 1937 that the, "problem is essentially local and should be decentralized as far as possible" (p.681). Allowing local governments to decide which land would be cleared and where new housing would be built virtually guaranteed the continuation and exacerbation of race and class segregation because white homeowners and land-oriented businesses controlled city governments and opposed residential integration along either race or class lines. Further, these interests quickly moved to ensure control of the new housing and renewal authorities created to direct and manage the process (Hirsch 1983, Sugrue 1996, Gotham 2001). Sugrue (1996) explains, "local governments had the final say over the expenditure of federal funds, the location of projects, and the type constructed" (p60).

In Chapter 3, I provided evidence that city governments underprovided city services and practiced expulsive zoning – the placement of negative uses (like garbage incinerators) in poor and minority neighborhoods. The land values in these areas were low; the environment was degraded. As a result, they were considered blighted. In the early 1930s, local realtors and bankers assisted the federal Home Owners' Loan Corporation (HOLC) in mapping property values of every block of every city in the nation (Gotham 2000). The HOLC's low appraisal of neighborhoods of color and large numbers of renters is well known (Jackson 1985, Weaver 1948). These areas too, were considered slums. In San Antonio, 82,000 Mexican Americans populated a 4-square mile neighborhood west of downtown. Many of the homes were wooden

shacks or converted horse stalls. Tellingly, the neighborhood lacked paved and lit streets, parks, and sufficient sewer capacity (obviously the doing of the local government). Annual flooding created a breeding ground for mosquitos (Fairbanks 2000). Neighborhoods like this *barrio* – predominately populated with people of color and renters – particularly those close to downtowns or homogenous white neighborhoods, were the first to be cleared (Hirsch 1983, Sugrue 1996).

At the same time, in order to preserve property values and access to FHA loans (which required racial homogeneity), white homeowners vigorously blocked the building of low-income and multi-unit housing in their neighborhoods (Weaver 1948, Sugrue 1996, Hirsch 1983). Weaver (1948) reports that even whites living miles away from proposed projects objected to their development on the grounds that their property values would be threatened. Nearly all new housing was provided on a segregated basis – that is, whites and nonwhites were not to live in the same projects (Weaver 1946). In order to provide enough units for racial minorities, and given the few sites that were available for building, many of the public housing projects were constructed as high-rise buildings – which, even at the time, were understood to be less desirable for the successful integration of people in need (Weaver 1946). Thus, as neighborhoods with large populations of renters and people of color were razed, these residents were displaced into even more densely segregated communities. In both the decisions regarding clearance and the decisions regarding the building of replacement housing, local control generated increased segregation.

The second important feature linking urban renewal to segregation was underfunding. Basil Stockbridge, Executive Assistant to the United States Building and Loan League, complained that, “it can readily be seen that the Authority’s activities will hardly scratch the

surface of the real needs of the country in eliminating urban slums and blighted areas" (Stockbridge 1938, p329). The Act required that the development of any new housing be accompanied by the razing of unsafe or insanitary dwellings, "substantially equal in number to the newly constructed dwellings provided by the project" (Wagner-Steagall Act, 1937, p5). But the new housing did not need to be located where the old housing had stood. Additionally, it was possible to raze more housing than was actually built. The lack of adequate funds meant first, that many slums remained, and second, that the number of new, affordable units was generally lower than the number cleared. Because of this, overcrowding in existing poor and minority neighborhoods worsened.

Furthermore, the receipt of federal funds required the local community to contribute funds for construction, typically in the form of land donation and property tax exemption, as well as funds for ongoing operation of the project (Levine 1941). Many cities eagerly accepted the federal dollars, but budgeted vastly insufficient amounts for the maintenance of public housing. So, even though by the 1950s most housing authorities stopped the explicit segregation of public housing tenants, and in some cases promoted peaceful race relations (Weaver 1946, 1956, Collins 2004), the degradation of the units meant that they had already become housing of last resort. Those who could avoid public housing did and preexisting segregation meant that it was whites who could most easily find housing in the private market.

As is true of all large government endeavors, the coalition in support of the Wagner Act and its later revisions was a collection of diverse, conflictual interests. These interests can be roughly categorized as those who emphasized slum clearance versus those who sought "public low-rent" housing (Ickes 1935, p109).[84] The former included business interests who held

[84] Although of course, there was diversity within these broad groups, see Marcuse 1995.

property in and/or relied on a healthy economic market in the downtown of cities, real estate elites, urban planners, homeowners, and local politicians hoping to increase the tax base (Zipp 2012, Ringelstein 2015, Avila and Rose 2009, Gotham 2001, Sugrue 1996). As one journalist representing this set of interests explained, "the housing problem is not merely one of replacing insanitary or unhealthful dwellings for large numbers of our people. More importantly, it involves the whole problem of progressive neighborhood decay, which for years has been eating like a cancer at the heart of every great city in America. The victims of this cancer are not only slum dwellers. In greater number these victims are taxpaying, home-owning families in neighborhoods from humble to well-to-do in all parts of the country" (Lewis 1937, p189).

On the other side were those concerned about the extreme housing shortages among lower-income residents, severe overcrowding plaguing minority neighborhoods, and the influence of slums on lax moral standards and community disorder (Dean 1949, Zipp 2012, Meyer 2000, Hirsch 1983). This group included many low-income and working class residents, people of color, organizations like the NAACP, institutions like the Chicago Defender, unions, and social workers (Meyer 2000, Gotham 2001, Compass 1936).

From the outset, slum clearance supporters, like the National Association of Real Estate Boards, were opposed to direct government provision of housing (Gotham 2001). However, much of the land that local elites viewed as blighted and sought to redevelop was residential, and the areas were often physically quite large. Razing the houses and assembling parcels required eminent domain, which required a clear public purpose. Public housing offered this justification, but only when *local* authorities engaged in the taking – thus necessitating local control.[85] Public

[85] In *United States v. Certain Lands in the City of Louisville* (1935) the 6th Circuit Court ruled that the condemnation of land for slum clearance by the *federal* government was unconstitutional because it did not constitute a use necessary to carry out the powers delegated to Congress. The Housing Act of 1937 thus moved to decentralize

housing advocates worried that local control over site selection and construction would exacerbate segregation (Meyer 2000), but without support from the slum clearance interests, public housing would have collapsed nearly as soon as it started for lack of funding (Marcuse 1995).

When the Wagner-Stegall Housing Act was revised and expanded in 1949 and 1954, power shifted toward the interests favoring slum clearance and segregation. Because the crisis of the Great Depression had abated, slum clearance was much more popular with voters and elites than was public housing (Fairbanks 2000, Zipp 2012).[86] As Gotham (2001) explains, these revisions, "represented the culmination of real estate industry lobbying efforts to curtail the production of public housing, create local redevelopment authorities with broad powers of eminent domain, and provide generous public subsidies for private redevelopment" (p297). By the time the last funds were allocated to local governments in 1974, the program had operated for more than 25 years as a mechanism to maintain and deepen segregation; it was termed the, "successor-weapon to the restrictive covenant and the racial zoning ordinance" (Abrams 1950). According to Collins and Shester (2013), urban renewal cumulatively resulted in the clearance of 400,000 housing units and 57,000 total acres; 300,000 families were displaced, about 54% of whom were nonwhite.[87] But, as we saw with racial zoning in Chapter 2, there was great variation in the local pursuit of urban renewal funds, and thus its effect on segregation.

To provide evidence of the relationship between urban renewal and segregation, I rely on a dataset gathered by Collins and Shester (2013). In their article, Collins and Shester (2013)

housing administration – requiring local housing authorities to be established to receive loans and grants from the federal government and engage in slum clearance and public housing construction (Freedenberg 1941).

[86] The Housing Acts were not the only mechanism cities used to engage in urban renewal, but patterns were similar with regard to other programs. For instance, Barrett and Rose (1999) provide evidence that local business, politicians, and real estate interests utilized highway construction to produce similar outcomes.

[87] Collins and Shester (2013) provide significant evidence that these measures accurately capture urban renewal activity undertaken by cities.

show that slum clearance and urban development programs had quantifiable *positive* benefits on city-level measures of income, property values, employment, and poverty rates. I seek to determine whether or not the program also increased race and class segregation. Collins and Shester's data represent all funds approved and disbursed under Title 1 of the 1949 Housing Act between 1950 and 1974. The data were gathered from the Department of Housing and Urban Development's Urban Renewal Directory. Cities applied for federal grants for particular urban renewal projects, and the directory listed the value of total approved and disbursed grants as of the date of publication. I add to these data each city's level of white/nonwhite and renter/owner segregation in 1980, measured using the *H* Index described in Chapter 1:

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents total population of neighborhood *n* or city *c* and E is the entropy (diversity) of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city (no segregation), and 1 where all neighborhoods contain only one group (high segregation).

First, I regress *Total Approved Urban Renewal Funds* (in hundreds of millions of dollars) as of 1974, on the *H* Index of *Segregation in 1950*. We should expect that cities with a strong preexisting propensity for segregation should have been the most eager applicants for federal funds. I add a series of city characteristics also measured in 1950 to account for the many demographic and environmental conditions that might have both led cities to seek urban renewal funding and be correlated with segregation. These controls include the proportion of housing units that were *Owner* occupied, *Median Home Value*, the share of housing units that were *Dilapidated*, the share that were *Built Prior to 1920*, and the share that lacked *Indoor Plumbing*. I include *Total Population*, the share of the population that was *Nonwhite*, median *Educational Attainment* of the population over age 24, the log of *Median Family Income*, the *Employment*

Rate, the share employed in *Manufacturing*, and the percentage of families with *Income Below $2,000* in 1949. These variables were all provided by Collins and Shester (2013). I add fixed effects for region, and report robust standard errors clustered by state. Collins and Shester provide data for all cities with more than 25,000 residents in 1950 and 1980 (482 in total), but I only have segregation measures for 172 observations. Tables 4.1 presents the results (summary statistics are in appendix Table A4.1).

Table 4.1: Relationship between Preexisting Racial Segregation and Approved Urban Renewal Funds

	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Segregation, 1950	2.49	0.551	0	1.205	0.321	0.001
% Owner occupied, 1950				0.004	0.005	0.456
Median Home Value, 1950 (log)				0.128	0.255	0.617
% Dilapidated, 1950				0.012	0.016	0.443
% Built Pre-1920, 1950				0.009	0.003	0.011
% Units w/o Plumbing, 1950				-0.005	0.005	0.342
Population (millions), 1950				0.706	0.098	0.000
% Nonwhite, 1950				0.005	0.006	0.422
% Employed Manufacturing, 1950				-0.002	0.004	0.539
% Employed, 1950				-0.019	0.023	0.419
Median Education, 1950				-0.028	0.062	0.655
Family Income, 1950 (log)				0.25	1.166	0.831
% Incomes Below $2000, 1950				-0.003	0.023	0.896
Constant	-0.237	0.162	0.152	-1.771	8.885	0.843
N	173			172		
R^2	0.227			0.679		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

Table 4.1 reveals that the application for urban renewal funds is strongly correlated with preexisting segregation. Those places that had a propensity for segregation were the most likely to apply for federal funding – even accounting for all of the physical factors that would have generated such applications. Topeka, Kansas, with a segregation index of 0.26 in 1950, applied for about $17.5 million in urban renewal funds over the course of the program. Kansas City, Kansas, where the segregation index was 0.54, applied for nearly $53 million. Atlanta, Georgia, with a segregation index of 0.67, applied for more than $100 million. In Richamond, VA, where

the segregation index was 0.51, city leaders only asked for $37 million. Salt Lake City, Utah with a segregation index of 0.18 applied for less than $5 million compared to Denver, Colorado's application of $83 million with a segregation index of 0.49.

Next, I analyze the effect of urban renewal funding on future levels of *Segregation* (*H* Index measured in 1980), conditional on preexisting segregation (*H* Index measured in 1950). The independent variable in these analyses is *Total Disbursed Urban Renewal Funding* (in hundreds of millions of dollars) as of 1974. I do not have data on renter segregation in 1950, so these analyses use the 1950 level of racial segregation as the control. Again, I present the models with and without demographic and environmental controls measured in 1950. Table 4.2 shows the results for racial segregation and 4.3 shows renter segregation.

Table 4.2: Relationship between Dispersed Urban Renewal Funds and Future Racial Segregation

	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Urban Renewal Funds ($100 millions)	0.073	0.021	0.001	0.073	0.029	0.014
Segregation, 1950	0.514	0.11	0.000	0.476	0.087	0.000
% Owner occupied, 1950				0.002	0.001	0.088
Median Home Value, 1950 (log)				0.118	0.043	0.010
% Dilapidated, 1950				-0.004	0.004	0.350
% Built Pre-1920, 1950				0.002	0.001	0.152
% Units w/o Plumbing, 1950				-0.001	0.001	0.165
Population (millions), 1950				-0.004	0.017	0.832
% Nonwhite, 1950				0.007	0.002	0.003
% Employed Manufacturing, 1950				0.003	0.001	0.003
% Employed, 1950				0.006	0.006	0.329
Median Education, 1950				0.007	0.014	0.642
Family Income, 1950 (log)				-0.292	0.187	0.127
% Incomes Below $2000, 1950				-0.001	0.004	0.726
Constant	0.017	0.032	0.609	0.469	1.578	0.768
N	172			171		
R^2	0.639			0.711		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

Table 4.3: Relationship between Dispersed Urban Renewal Funds and Future Renter Segregation						
	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Urban Renewal Funds ($100 millions)	0.023	0.006	0.001	0.020	0.009	0.037
Segregation, 1950	0.005	0.032	0.889	0.016	0.041	0.700
% Owner occupied, 1950				0.000	0.001	0.703
Median Home Value, 1950 (log)				0.059	0.030	0.060
% Dilapidated, 1950				0.000	0.001	0.676
% Built Pre-1920, 1950				0.000	0.000	0.464
% Units w/o Plumbing, 1950				0.001	0.000	0.052
Population (millions), 1950				0.003	0.011	0.761
% Nonwhite, 1950				0.000	0.001	0.997
% Employed Manufacturing, 1950				0.000	0.001	0.826
% Employed, 1950				-0.001	0.003	0.715
Median Education, 1950				0.016	0.007	0.032
Family Income, 1950 (log)				0.008	0.118	0.946
% Incomes Below $2000, 1950				0.001	0.003	0.800
Constant	0.129	0.013	0	-0.591	1.130	0.604
N	172			171		
R^2	0.229			0.334		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

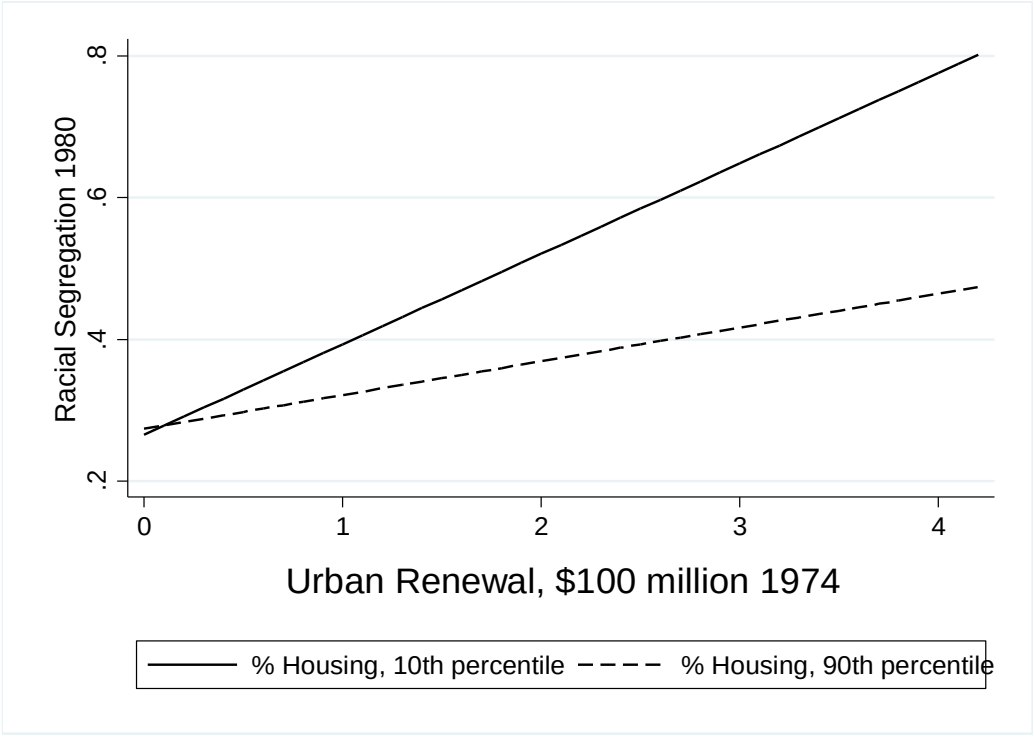
Tables 4.2 and 4.3 reveal that the vigorousness with which a city pursued urban renewal affected the level of segregation after the completion of the program (conditional on starting levels of segregation). The results are much more powerful for racial segregation than for renter segregation. Every additional $100 million in urban renewal funds is associated with a 7% increase in racial segregation, compared to a 2% increase in renter segregation.[88] As was the case for the effects of zoning shown in Chapter 2, local policy implementation is more tightly linked to racial housing patterns than class housing patterns.

This historical evidence indicates that cities varied not only with respect to their participation in the urban renewal program, but also in their investment in the ongoing maintenance of public housing. To investigate this possibility, I add to the data a measure of the

[88] Collins and Shester (2013) use an instrumental variable approach in their analysis. They estimate urban renewal funds with the number of years the city had access to the program as a result of state enabling legislation. Even more powerful results are evident when I replicate their strategy.

share of total expenditures each city spent on *Housing and Community Development Operations*[89] in 1972. I interact this variable with the measure of *Total Urban Renewal Funding* in Model 2 from Table 4.2 above.[90] I also add a control for the number of *Public Housing Units Per Capita* built under the Housing Act (from Collins and Shester) to account for differences in the need for maintenance spending.[91] Figure 4.1 reveals how urban renewal funding operated differently when cities invested in ongoing maintenance and when they did not.

Figure 4.1: Urban Renewal Interacted with Housing Operations



[89] This variable was constructed using the finance data described in Chapter 1. It is calculated as the total dollar amount spent on housing and community development minus housing and community development capital outlays, divided by total expenditure.

[90] Adding the interaction to Model 2, Table 4.3 (analyzing renter segregation) produces a similar effect that is smaller in size than the effect on racial segregation.

[91] Interestingly, the coefficient on this variable is negative – meaning that cities that had more public housing overall were less segregated. However, interacting the number of public housing units with urban renewal funding results in a positive coefficient. This indicates that slum clearance and public housing were both factors in the increase in segregation that urban renewal produced.

In cities that accepted urban renewal funds, but budgeted nothing for operations in 1972, urban renewal had a steep positive effect on racial segregation. In places that provided municipal funds for the maintenance of renewal sites, increasingly vigorous renewal expenditures had a much smaller effect on segregation. Of course, this analysis does not offer causal leverage. It is entirely plausible that the cities that were inclined to invest in maintenance had a social/political culture that led to a smaller increase in residential segregation for other reasons. Whatever the underlying cause was – cities that accepted federal funds without ongoing budget provision for housing operations segregated the most rapidly. This variation aside, generally speaking, where slums were cleared and public housing was built, segregation increased.

Yet, even while urban renewal was largely carried out to the benefit of white homeowners and land-oriented businesses, their control over public policy was not absolute; the rising Civil Rights movement threatened it significantly. As of 1960, not a single large city in the United States had elected a black mayor. By 2010, more than a third had (Vogl 2014). Changes to voter eligibility brought by the 24th amendment and the 1965 Voting Rights Act increased turnout of racial minorities and the poor during this period as well (Filer, Kenny, and Morton 1991).

I use data collected by Vogl (2014) to investigate the relationship between levels of segregation and interracial electoral competition. Vogl (2014) analyzes mayoral election returns between 1965 and 2010 for all cities that had 1960 populations that were at least 50,000 and 4% black (194 cities). His data record the race of the top two candidates (either black or not black) and their vote totals. I add segregation measures to Vogl's data resulting in complete data for

122 cities.[92] During the 1960s, only 13 black candidates sought the mayor's seat in Vogl's dataset; this number rose to 57 in the 1970s, and 84 in the 1980s. Interracial electoral competition was much more likely in more segregated cities. To show this, I regress a dummy variable coded 1 if the election was *Interracial* (e.g. featured a black candidate running against a non-black candidate) on the city's *H* Index of *Segregation* for the election year (interpolated between Censuses). I add the share of the city's residents that were *White* and the share *Renting* their homes, as well as the natural log of total *Population*, and a trend variable for the *Year* as controls. I use a random-effects logit model with errors clustered by city. I restrict the analysis to elections that occurred between 1965 and 1990 in order to focus on the post-war period. The regression includes 731 elections from 117 cities. Figure 4.2 shows the marginal effect of segregation on the probability of witnessing an interracial election, holding all other variables at their mean values.

[92] I am missing pre-1970 segregation measures for 20 cities in Vogl's dataset. I use 1970 segregation for the 36 elections between 1965 and 1970 for these places. Results are robust to the exclusion of these observations.

Figure 4.2: Segregated Cities Saw More Interracial Elections in the Post-War Period

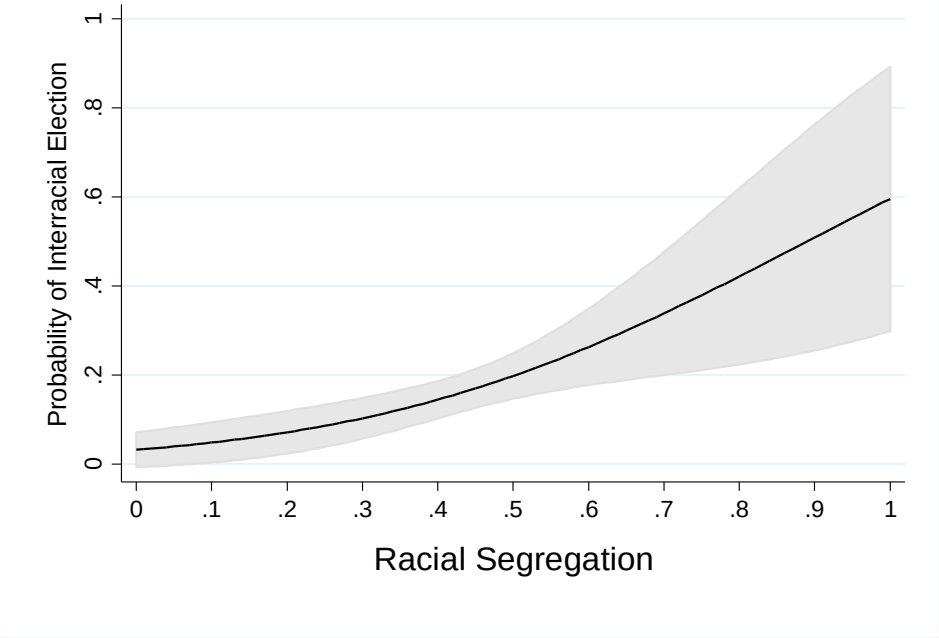


Figure 4.2 makes clear that racially segregated cities were much more likely to experience interracial elections – even controlling for the share of the population that was nonwhite. As will be shown in Chapters 6 and 7, segregated cities are also more likely to have racially divisive politics. Although the dividing lines were in place long before the 1960s, they became much more visible in electoral politics during the postwar period. Elections featuring black candidates (and white contenders) were contentious – driving up turnout among both blacks and whites, and decreasing margins of victory (Vogl 2014, Lublin and Tate 1995, Washington 2006). However, the vast majority of elections were still won by whites. Blacks only won 13% of the 731 contests reflected in Figure 4.2; moreover, these wins were concentrated in places with majority black populations. Although whites maintained power in

most cities throughout the 1960s and 70s, their hold was tenuous. This weakness became increasingly clear through the successes of the open housing movement.

In 1942, only 36% of whites said that they would not be bothered if a black person with their same income and education moved into their block (Schuman and Bobo 1988); the majority of whites, "expect[ed] a vigilant government to protect their segregated neighborhoods" (Sugrue 1996, p63). These beliefs were intimately intertwined with opposition to public housing, which was viewed as "Socialist housing" (Los Angeles Times, March 23, 1952 p E1); specifically, public housing was viewed as, "a taxpayer-subsidized handout for the feckless" (Sugrue 1996, p63). Although a majority of the poor in central cities were white, racial minorities were disproportionately poor and poorly housed.[93] Many whites opposed public housing because they feared, "a change in the racial character of the neighborhood" (New York Times, April 13, 1952, p28). Efforts to locate low-income housing in home-owner neighborhoods and/or integrate white areas was viewed as a government assault on owners', "right to protect one's own property" (Thomas, William P., Letter to the Editor, Washington Post, February 27, 1949).

In order to prevent integration in housing, white homeowners organized neighborhood associations, encouraged vigilant city inspectors to fine overcrowded minority homes, sent hundreds of letters to city governments, turned out in droves at public hearings, and engaged in violent assaults on black residents (Sugrue 1996, Hirsch 1983). But defending white, home-owner neighborhoods was a zero-sum game. For every area that successfully halted integration or low-income housing, another had to absorb (or block) it. This led to a lack of unity among segregationist forces. At the same time, support for scientific racial categorization plummeted

[93] About 62% of persons below the poverty line in central cities were white in 1959. Approximately 14% of whites were poor compared to 41% of blacks (https://www2.census.gov/prod2/popscan/p60-068a.pdf, p7).

(Hayward 2013), and outright, public expressions of racism were, "placed on the defensive" (Hirsch 1983, p175, Schuman et al. 1985).

Advocates of open housing began to win concessions from the government. By 1945, in more than 200 cities, municipal authorities dedicated to maintaining peaceful race relations, established interracial commissions, committees, or agencies that advocated for civil rights reform (Hirsch 1983, p42). These often appeared in the wake of violent riots (Meyer 2000). The racial restrictive covenant, long used by real estate developers and homeowners' organizations to keep minorities out of white neighborhoods, became unenforceable with a Supreme Court decision in 1948 (Abrams 1955). Even before this decision, some municipal judges were refusing to enforce covenants (Hirsch 1983).

Because the government owned and operated public housing, it was an obvious target for constitutional claims of unequal treatment. As early as 1944, New York City enacted an ordinance prohibiting tax-exempt status for housing projects that denied access to tenants on the basis of race. The ordinance had been spearheaded by the city's interracial relations commission. In other places, civil rights organizations pressured municipal housing authorities to integrate public housing; the NAACP brought this matter before the court (Meyer 2000, Sugrue 1996). In 1953, the California Court of Appeals ruled in *Banks* v. *Housing Authority of San Francisco* that San Francisco's Housing Authority must assign residents to public housing without regard to race or color. When the Supreme Court declined to hear the appeal (thereby allowing California's ruling to stand), the case became precedent-setting. By 1954, 21 cities had passed some form of anti-discrimination law (Meyer 2000) and in 1962, President Kennedy signed an executive order,

> directing Federal departments and agencies to take every proper and legal action to prevent discrimination in the sale or lease of housing facilities owned or operated by the

> Federal Government; housing constructed or sold as a result of loans or grants to be made by the Federal Government; and housing to be available through the development or redevelopment of property under Federal slum clearance or urban renewal programs (Papers of Burke Marshall, Assistant Attorney General for Civil Rights).

Not only did cities and states pass anti-discrimination laws covering public housing, some also enacted open housing legislation that sought to prevent discrimination in the private housing market. The leader of the movement was again New York City, passing an ordinance prohibiting, "race, creed or national origin" discrimination in rental housing in 1957 (Bennett 1957b, p9). The ordinance was, "bitterly fought by property owners and real estate representatives" (Bennett 1957a, p7) and explicitly exempted room rentals in single-family homes or duplexes unless they were located in large housing developments (Bennett 1957b). Still, the passage of open housing laws represented clear policy change, largely emerging from the bottom-up. By 1968, 22 states had enacted fair housing laws that covered nearly all sales and rentals (Collins 2006). Such laws were passed in response to vocal, mobilized advocates in black and liberal white communities (Collins 2006). The 1968 Federal Fair Housing Act extended this coverage nationwide.

Despite such policy progress, even as of 1973, the General Social Survey found 64% of white respondents believed that a homeowner should be able to, "decide for himself whom to sell his house to, even if he prefers not to sell to Negroes" (GSS 1973), and a homeowners' rights movement arose in response to the open housing laws. In Detroit, a collection of neighborhood organizations gathered more than 44,000 signatures in support of a homeowners' right initiative (Chicago Tribune, July 13, 1963). The ordinance passed but was declared unconstitutional by the Wayne County Circuit Court in a suit brought by the NAACP (Chicago Defender, December 23, 1964, Sugrue 1996).

In California, after the state legislature passed a fair housing law known as the Rumford Act in 1963, a statewide campaign for its repeal was led by the California Real Estate Association and the California Apartment Owners Association who combined to form the Committee for Home Protection (Self 2003, Duscha 1964, Turner 1964). Proposition 14, confusingly referred to as "The California Fair Housing Initiative," prohibited the state from, "denying, limiting, or abridging the right of any person to decline to sell, lease, or rent residential real property to any person as he chooses."[94] In an analysis of the campaign for Proposition 14, Self (2003) and Brilliant (2010) show that supporters rarely invoked race in their arguments, focusing instead on freedom and property rights. Reporting on the initiative battle, the Washington Post quoted a pamphlet issued by the Committee for Home Protection that stated, "Those who stand for the preservation of individual property rights today are in direct line of descent from the patriots who endured the hardships of the long winter at Valley Forge with George Washington" (Duscha 1964, pA2). Prominent Democrats including Governor Edmund Brown opposed the initiative, and a number of "right-wing Republicans" including Ronald Reagan and Barry Goldwater were "extremely active" in support of the initiative (Duscha 1964, pA2). In the end, the initiative passed with more than 65 percent of the vote, even as Johnson won the presidential race decisively (Greenberg 1964, p1).

Scholars have identified varying patterns of opposition to open housing in different places. For instance, Sugrue (1996) shows that in Detroit, the staunchest integration resisters were working-class white ethnics who owned modest, single-family homes (see pp236-237). In Oakland, Self (2003) finds that it was *not* solely, "an anti-liberal white working class engaged in direct struggle with African American," but rather middle and upper-class whites who,

[94] SALES AND RENTALS OF RESIDENTIAL REAL PROPERTY California Proposition 14 (1964). http://repository.uchastings.edu/ca_ballot_props/672

"understood property rights as sacrosanct expressions of their personal freedom" (p168). Collins (2004) shows that states with higher union membership rates were more likely to pass fair housing legislation and Self (2003) provides evidence that the UAW campaigned against Proposition 14, although Brilliant (2010) argues that rank and file union members were staunchly opposed.

To better understand the individual correlates of opposition to open housing, I gathered data from the 1964 Field Poll in California.[95] Carried out in seven waves between January and October, the poll asked respondents about their support for the Rumford Act and Proposition 14. I recoded these questions to into a variable coded 1 if the respondent *Opposed Open Housing*.[96] I use logistic regression to regress this variable on several demographics including whether or not the respondent *Owns* (vs. rents) her home, her *Race* (coded 1 for white and 0 for nonwhite or other), her *Age*, her level of *Education*, whether or not the respondent or her spouse belongs to a *Union*, and her *Economic Level* (with higher values representing lower classes).[97] In addition, I include a measure indicating whether or not the respondent planned to vote for the *Democratic*

[95] Ideally, I would have analyzed the relationship between community segregation and public opinion on open housing. Unfortunately, the Field Poll recorded no geographic identifiers other than the very broad categories of Northern and Southern California.

[96] For waves 2, 3, and 5, I used the question about the Rumford Act. In waves 1 and 7, no Rumford Act question was asked, so I used a question about Proposition 14 instead. Waves 4 and 6 did not include open housing questions. The text of the questions are as follows: (Rumford Act) Well, as you know the Rumford Act is a Law which makes it illegal for apartment house owners, owners of publicly assisted housing, and real estate brokers to discriminate against anyone because of race, color, religion, national origin or ancestry in the renting or selling of housing accommodations. From what you know of it, do you approve or disapprove of the Rumford Act?" (Proposition 14) "If you were voting today, would you approve or disapprove of this addition to the state constitution? (the amendment reads as follows – prohibits state, subdivision, or agency thereof from denying, limiting, or abridging right of any person to decline to sell, lease, or rent residential real property to any person as he chooses. Prohibition not applicable to property owned by state or its subdivisions, property acquired by eminent domain, or transient lodging accommodations by hotels, motels, and similar public places." Where possible, I use the question about the Rumford Act instead of Proposition 14, because the waves included very different wording of the Proposition question (adding more and less detail about the content).

[97] The coding of this variable is obscure. The codebook suggests that 10 categories were used and lists the following labels "upper," "upper middle," "upper middle," "middle," "middle," "middle," "lower middle," "lower middle," "lower," and "lower." One can only assume that the coders were instructed in some way to make distinctions across categories.

Presidential ticket (Johnson/Humphrey). I cluster the standard errors by poll wave. The results, presented in Table 4.4 paint a clear picture confirming and undermining various aspects of the historical accounts. Summary statistics are presented in Table A4.2.

Table 4.4: Demographic Characteristics of Open Housing Opponents

	β	Std. Err.	P>|t|
Home Owner	0.193	0.065	0.003
White	1.205	0.412	0.003
Education Level	-0.177	0.035	0.000
Union Member	0.284	0.111	0.011
Age	-0.004	0.053	0.934
Economic Level	0.003	0.026	0.897
Democratic Presidential Voter	-0.896	0.386	0.020
Constant	0.33	0.334	0.323
N	4,860		
R^2	0.0575		

Note: Logistic regression with errors clustered by poll wave.

White homeowners were clearly in opposition to open housing, as were less educated respondents, Republicans, and union members. After controlling for these characteristics, economic status and age played no role in the determination of political opinions on open housing. Since the earliest years of the century, the most consistent opponents of integration have been white homeowners who came to view the protection of their neighborhoods as a right to be protected by government. These residents understood the "very essence" of Proposition 14 to be the avoidance of, "state involvement in private decisions in the sale of rental of privately owned residential property" (Blake 1964, pK1).

In 1966, the California Supreme Court declared Proposition 14 in violation of the Constitution, and the Rumford Act was allowed to stand. However, the lack of support for open housing among whites and owners would prove to be a formidable barrier for integrationists. Collins (2004) reveals that fair housing policy had little effect on black housing market outcomes

and did nothing to affect levels of segregation. The changes local communities experienced during post-war period would have other long lasting effects. When California voters overwhelmingly supported Proposition 14, they also overwhelmingly supported Johnson (over Goldwater) for president. Many contemporaries and scholars would explain this apparent inconsistency as Mark Brilliant (2010) does:

> Californians who voted *for* Prop 14 but *against* Goldwater were not so much signaling a wholesale rejection of civil rights…They were, however, hoisting a 'no trespassing' sign. They drew a line that cordoned off a more public sphere where the state could and should protect against discrimination from a more private sphere where no such state laws could tread (p206).

As Kruse (2005) so forcefully demonstrates, and I quantify in Chapter 7, this turn toward understanding neighborhood protection as a right (rather than a racist act), did not, in fact, represent an expression of newly discovered profound principles. It was, rather, a means to a segregationist end, and would serve as the rhetorical foundation for a rising conservative movement. More immediately, the rise of black candidacies, the advancements of the Black Power and Civil Rights movements, and the changes to public policy encompassed in the Voting Rights and Fair Housing Acts all threatened white control over central cities. At the same time, numerous federal and local policies made suburban living an attractive option – one that would offer white homeowners more complete control over the political arena. The next chapters offer evidence of these patterns.

Chapter 5: The Rise of Suburban Segregation, 1970-2011

In 2012, the Manhattan Institute issued a report entitled "The End of the Segregated Century," declaring that, "all-white neighborhoods are effectively extinct," (Glaeser and Vigdor 2012). Though not all demographers shared the optimism of Glaeser and Vigdor, many trumpeted the decline of neighborhood segregation in America following the release of the 2010 Census (Frey 2014). While segregation *between neighborhoods* has declined, another type of segregation has remained remarkably stable, even rising in the post-war period. Segregation *between cities* is persistent along both race and economic lines (Fischer et al 2004, Massey and Hajnal 1995). This means that while integration within cities has increased, cities as a whole have become less racially and economically diverse over time. As a result, a greater share of total segregation in metropolitan areas is now accounted for across cities rather than within them (see Chapter 1). This is what is commonly understood as the process of suburbanization.

While we have substantial evidence on the role federal policies have played in generating suburbanization (Jackson 1985, Massey and Denton 1993, Hayward 2013), our understanding of the ways in which local politics affects suburbanization has been limited. In previous chapters, I argued that segregation was pursued by local governments in order to enhance property values and make it possible to target local public goods towards white homeowners and land-oriented businesses. Such strategies, combined with political control of city councils and mayors' offices, ensured that local governments operated to protect the homogeneity of white homeowner neighborhoods and provide them with disproportionate benefits. In the post-war period, this control was threatened by increasing minority electoral participation and policy achievements. Here, I demonstrate that these changes contributed to suburbanization.

The analyses in this chapter rely on a measure of segregation that incorporates patterns of sorting both within cities and between cities and suburbs. This strategy offers an advancement over previous scholarship because it allows for a consideration of residential sorting at multiple geographic levels at the same time. Most scholars focus either on metropolitan level segregation (e.g. Dreier et al. 2004, Jackson 1985) or neighborhood segregation (e.g. Massey and Denton 1993) – but these types of sorting are intricately linked. By drawing on a nested measure of segregation for all metropolitan areas over a long time span (1980-2011), I am able to show that residents traded one type of homogeneity for another in response to political outcomes. I utilize time lags and metro area fixed effects to handle the problem of endogeneity, as race and class sorting can, in turn, generate different political outcomes (Massey and Hajnal 1995, Friesema 1969, Nelson 1992). In this chapter, I analyze the relationships between cities within metropolitan areas. I concentrate on the ways in which the politics of the central city (the city with the largest population in the metro area) affects demographic residential patterns in the suburbs. I find that when central cities elect minority mayors, when central city expenditures are higher and favor policing, a greater share of metropolitan area segregation is accounted for between cities rather than within them. I also show that in metropolitan areas where land use regulations are stricter in the suburbs than in central cities, more segregation is accounted for across cities. In short, when central city politics do not favor their interests, white and upper class residents are more likely to reside in different cities rather than in different neighborhoods and they lock in these sorting patterns through public policy. In the final section of the chapter, I show that communities with more whites and homeowners receive a disproportionate share of municipal spending.

Understanding the Link Between Segregation and Suburbanization

People choose where they live based, in part, on the types and quality of public goods and services provided in a community, as well as the taxes required to provide those goods and services (Tiebout 1956, Ely and Teske 2015, Banzhaf and Walsh 2008). However, not all residents are equally able to match these preferences with housing location. Low-income households have less choice than do high-income households because amenities (including schools, parks, and public safety) are capitalized into housing prices and rents. Racial and ethnic minority households have also been severely limited in their ability to live where they choose. In part, this is the due to the fact that minorities have lower average levels of income and wealth. But, as previous chapters have shown, it is also the result of concerted efforts by white homeowners to segregate them.

The long history of enforced racial segregation in America has been well documented. Between 1900 and 1940, neighborhood-level residential segregation expanded dramatically throughout the United States (Cutler, Glaeser, and Vigdor 1999). A variety of mechanisms ghettoized racial and ethnic minorities including violence and intimidation perpetrated by white residents, restrictive covenants written into housing deeds, and racial steering by real estate agents (McWilliams 1964, Sugrue 1996, Kruse 2005, Lassiter 2006). As previous chapters have shown, local, state, and federal policies also worked to establish and perpetuate segregation along race and class lines. Through actions like the passage of racial zoning ordinances (Chapter 2), the generation of neighborhood investment ratings through the Home Owners Loan Corporation (Hillier 2005), and official acquiescence to violent activity in protection of homes and neighborhoods (Hirsch 1983), governments pursued policies that limited the mobility of minority households (Ross 2008) between 1900 and 1940.

Around the time of the Second World War, patterns and strategies of segregation began to change. Segregation levels within cities leveled off, but ghettos grew much larger when minority populations increased in cities outside of the South (Cutler, Glaeser, and Vigdor 1999). Similar to previous decades, white homeowners utilized a variety of mechanisms to bar minorities and renters from moving to their communities. Organizing collectively through homeowners' associations, white homeowners controlled government decision making on matters such as the razing of slums, the rebuilding of downtowns, the placement of public housing, and zoning decisions that concentrated negative externalities in poor and minority neighborhoods.

However, as Chapter 4 revealed, starting slowly during the 1940s and then more rapidly during the 1950s and 1960s, white homeowners began to see their exclusive political control chipped away. The massive influx of wartime workers dramatically changed the racial and socioeconomic makeup of many large cities. In the 157 cities that had populations of at least 50,000 in 1940, the white population share declined about eight percentage points between 1940 and 1970 (from 90 to 82). By 2011, the white share of these cities decreased drastically to 52%. However, the share of renters *also* declined during this period, as homeownership rates expanded.[98] At the same time, black and Latino Americans' sustained battle for civil, economic, and political rights gained ground. As racial minorities began to contest and even win political representation, the open housing movement brought the possibility of neighborhood integration, and civil unrest coursed through many large cities. This period became fraught with uncertainty

[98] I only have time series data on homeownership rates for 60 cities. In these places, the share of homeowners rose from 35% in 1940 to 48% in 1970. Nationwide, the homeownership rate expanded from 43.6% to 63% during this period (Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1970). http://www.census.gov/library/publications/1975/compendia/hist_stats_colonial-1970.html

and fear for many whites placed an increasingly high value on segregation as they joined the ranks of homeowners.

Cutler, Glaeser, and Vigdor (1999) provide evidence that since the 1990s, white homebuyers' willingness to pay a premium for homogenous neighborhoods is the central factor perpetuating segregation. Overt racism has decreased dramatically over the last several decades (Schuman et al., 1997), but whites continue to express a preference for same race neighbors (Charles 2003) and minority neighborhoods continue to be perceived as having poor-quality amenities (Bobo, Kluegel, and Smith 1997, Ellen 2000, Emerson, Chai, and Yancey 2001, Krysan 2002, Bayer, Ferreira, and McMillian 2007). Ellen (2000) shows that a growing black population leads whites to leave neighborhoods and/or be unwilling to enter them. Card, Mas, and Rothstein (2008) report a distribution of tipping points (the size of the minority population that affects white population flows) ranging from 5% to 20%. Once a neighborhood reaches the tipping point, it quickly becomes predominantly inhabited by racial and ethnic minorities. White preferences for homogeneity are undoubtedly enhanced by persistent discrimination in the real estate and mortgage industries which limit minority access to some neighborhoods (Pager and Shepherd 2008, Gaslter and Godfrey 2005, Bobo 2001, Farley et al. 1994, Bobo and Zubrinski 1996).

However, while white preferences for white neighbors help to make sense of the fact that whites live in different *neighborhoods* than nonwhites, they do not help to clarify why whites live in different *cities*. Why, even as neighborhoods have grown more integrated, have cities become less so? The answer is politics and political control. Boustan (2010) finds that residents are willing to pay a 7% premium on housing in order to live in a higher-income suburb, in part, to gain access to higher school quality and lower property tax rates. Baum-Snow and Lutz

(2011) and Lassiter (2006) provide evidence that court-ordered integration of city schools led some white parents to seek out homogenous, suburban school districts. Kruse (2005) shows that when Atlanta's whites lost segregation battles and political control, many chose suburban homes. I build on the findings of these scholars to show that suburban sorting along race and class lines is also linked to central city elections of minority mayors, larger city budgets and a greater share of spending on police.

The rapid increase in the population of the suburbs during the post-war period was mostly not the result of white flight. Rather, rising incomes, low-cost federally-backed mortgages, the lucrative federal mortgage deduction, new housing construction in suburban tracts, and an extensive highway system all worked to bring residents to the periphery (Gotham 2000, Nall forthcoming). Yet, in the early decades of the post-war period, suburban living was much more accessible to whites and homeowners than to people of color and renters (Kruse and Sugrue 2006, Jackson 1985). This pattern eventually changed, allowing many racial minorities and renters live in suburban communities today (Frasure-Yokely 2016). However, as Briffault (1990) explains, "the increased heterogeneity of suburbia as a whole is usually not matched by a greater diversification *within* particular suburbs. There are now more poor and working-class people, more minorities and more industrial and commercial sites in suburbia. But poorer, working-class or black suburbanites are likely to live in different jurisdictions separate from those inhabited by affluent or white suburbanites" (p353). These trends have converged to increase divisions along race and class lines across city lines (C.S. Fischer et al. 2004, M.J. Fischer 2008).

In previous decades, processes of consolidation and annexation made city boundaries malleable so that those moving away from the center of the city would have resided within city

limits (Teaford 1979). However, in the post-war period, state annexation laws changed and political boundaries ceased to keep pace with residential spread (Briffault 1990). As a result, the number of incorporated municipalities in metropolitan areas grew and suburbs gained population, economic activity, and political power (Danielson 1976, Miller 1981, Burns 1994).

As independent municipalities, suburbs have the power to regulate land use for all parcels within their borders. Local governments employ land use regulations to manage the character of their community. Consequently, regulatory environments vary significantly from place to place. Cities are capable of enacting minimum lot sizes so that all development must be located on a certain acreage of land, requiring developers to preserve open space in their development, determining the number of multi-family units that will be allowed within city limits, requiring developers to pay a share of infrastructure improvements associated with new development, offering short/long review periods for zoning changes and building permits, and involving few or many local actors in the approval and planning process. Gyourko et al. (2008) find that there is a strong, positive correlation between different regulations. Specifically, if a city regulates in one area, it is significantly more likely to regulate in other areas as well. Einstein et al (2017) provide evidence that the accumulation of regulations reduces the supply of multi-family housing by allowing residents opposed to development to delay the process and file lawsuits. Gyourko et al (2008) also find that community wealth is positively related to regulatory environments. Places with high median home values, more college-educated residents, and higher incomes are most likely to police land use.

Public Opinion on Local Spending

In order for political preferences to be related to population sorting, it must be the case that different groups have different orientations toward government spending and different

policy priorities. At the national level, the gap between white and nonwhite support for government programs like social services, education, and assistance to the poor, as well as beliefs about the optimal size of government is persistent, systematic, and substantively large (Kinder and Winter 2001, Winter 2006, Jackman 1994, Tate 1994, Kinder and Sanders 1996, Dawson 1994, Bowler and Segura 2011). A related, but distinct gap between high and low socioeconomic status individuals also exists (Gilens 2005, Bartels 2008). Whites and the affluent tend to favor limited government while people of color and those of lower socioeconomic status are more supportive of spending and intervention. In an overview of this large literature, Hutchings and Valentino (2004) explain that the black/white opinion gap typically ranges from 35-50 points on matters dealing with race (like affirmative action and government aid to minorities), and more than 20 points on policies that are not explicitly racial, like government spending on welfare, social services, and education (see also Winter 2006, Federico and Luks 2005, Sears, Hensler, and Speer 1979, Kinder and Sears 1981).

There is less research on these questions at the local level, but scholars have found large racial and socioeconomic status divides with regard to candidate choice (Hajnal and Trounstine 2013b, Hajnal 2009), satisfaction with city services (Hajnal and Trounstine 2013a, Van Ryzin et al. 2004, Durand 1976), and trust in government (Rahn and Rudolph 2005, Marschall and Shah 2007). Hajnal and Trounstine (2013b) find that the largest divide in support for mayoral candidates is black versus white residents, with the divide between Latinos and whites close behind. The divide between Asians and whites is smaller, but persistent, as is the divide between high and low socioeconomic status individuals. In an analysis of the determinants of service evaluations among local residents, Hajnal and Trounstine (2013a) find that race stands out as the most powerful predictor. Again, the largest divides are between black and white and Latino and

white respondents, but class divides are also significant. In sum, white and wealthy residents tend to have more conservative spending preferences and support different candidates than do minorities and the poor at both the local and national levels. When political patterns favor nonwhite and poor interests, white and upper-class residents are inclined to select different localities. In the next sections, I provide evidence of these political contributors to segregation.

Measuring Suburbanization, A New Approach

In order to show that political outcomes affect segregation across city lines, I use a segregation measure that can be decomposed into within-city and across-city components. This measure allows me to take advantage of different predictions depending on the level at which segregation occurs and to control for aggregate preferences for homogeneity. In some metropolitan areas, whites and homeowners tend to be segregated from nonwhites and renters in different neighborhoods (indicating segregation at a low level of geography). In others, race and class sorting is more prevalent across city lines (indicating segregation at a higher level of geography). If a city increases its budget, there is no reason to believe that this would induce residents to sort into different *neighborhoods* but, I argue, it could lead to sorting into a different *city*.

While households may choose residential locations that result in more homogenous neighborhoods for a variety of reasons, only cross-city segregation ought to be affected by the *total* bundle of public goods provided by the city and the election of city officials. Because different racial and economic groups have different preferences for local representatives and policies, when budgets or election outcomes are less favorable to white and homeowner preferences, these residents should be more likely to sort into residential locations outside of city

boundaries.[99] We most commonly think of segregation across city lines as a process of suburbanization, but sorting between suburbs is another version of the same pattern. The result should be an increase in the share of metropolitan segregation across cities as opposed to within them.

To determine whether or not city political patterns favoring nonwhite and renter interests affect metropolitan segregation, I constructed a dataset measuring segregation in primary metropolitan statistical areas from 1980-2011 GeoLytics' Neighborhood Change Database (NCDB) and the 2007-2011 American Community Survey. These data allowed me to create a panel dataset measuring segregation at the census-tract level for each metropolitan area. To measure segregation, I use the *H* Index described in Chapter 1. The *H* Index allows for decomposition of within-city and across-city components.[100] It measures the evenness of dispersal of groups across geographic units (in this case, Census tracts, cities, and metropolitan areas).

The groups I use to calculate the *H* Index here are white/nonwhite, renter/homeowner, and wealthy/non-wealthy. Since 1980, the Census has tabulated the number of residents in each Census tract that self-identify as racially white and ethnically not-Latino; these individuals are classified as whites in my analysis. All other racial/ethnic combinations are classified as

[99] There is no evidence that the inverse is true. When budgets favor white/wealthy preferences, poor and minority residents have not been found to move to communities that prioritize their demands and needs. For instance, Levine and Zimmerman (1999) investigate the potential for states' welfare programs to act as magnets for the poor. They find little support for this hypothesis. The process of gentrification – where affluent residents return to the central city – is another scenario that could lead to movement among poor residents. Here too, scholars have found no evidence that gentrification leads poor households to leave their housing units (Vigdor, Massey, Rivlin 2002). The most likely explanation, of course, is that it is whites and the wealthy who have had the greater ability to choose where they live. Beyond this, political outcomes are typically much more responsive to the preferences of whites and the wealthy (Hajnal 2009; Gilens 2014).

[100] The approach is similar to the one taken by C.S. Fischer et al. (2004) who analyze trends over time in the level at which segregation occurs. In contrast to C.S. Fischer et al. (2004), I seek to determine whether such patterns are related to city policy choices, not just time.

nonwhites. The Census gathers tenure information on all occupied housing units, noting whether they are rented or owned. The share of units rented versus owned comprises my measure of segregation. Finally, the Census reports income categorically, not continuously, so wealthy refers to the share of families in each census tract with incomes above particular thresholds for each census year. [101] These thresholds were determined by calculating the average family income for all Census tracts in the United States for each Census year. The wealthy threshold represents the income bin with its starting point closest to the 90th percentile of the distribution. The thresholds for each census year are: $35,000 for 1980, $75,000 for 1990, $100,000 for 2000, and $150,000 for 2011. All families with this amount of income or more are included as wealthy.[102]

As explained in Chapter 1, the *H* Index measures the degree to which the diversity of subunits differs from the diversity of the larger unit, expressed as a fraction of the larger unit's total diversity and weighted by the subunit's share of the total population. For each census year, I calculate an *H* Index for all cities within a metropolitan area, denoted H_{m_c} and all tracts within each city, denoted H_{c_t}.[103] These *H* Indices reveal how diverse each census tract is given the diversity of the city and how diverse each city is given the diversity of the metropolitan area.

$$H_{m_c} = \sum_{c=1}^{C} \frac{P_c}{P_m}\left(\frac{E_m - E_c}{E_m}\right)$$

[101] I use family as opposed to household income because the NCDB does not report household income at the tract level.

[102] Census tracts range from 0 to 100% wealthy, with a mean of 18%, a median of 13%, and a standard deviation of 16%.

[103] Census tracts are perfectly nested within states and counties. However, in some cases tracts cross city lines. In these cases, GeoLytics assigned the tract to the city containing the largest share of the tract population. In 2011, tracts are weighted by the share of population contained in each city. Observations are unique when defined by year, tract, city, county, and metropolitan area. Tracts located in unincorporated areas within a metropolitan area are combined as a single unincorporated unit. Tracts outside of metropolitan areas are not included in the analysis. I use Metropolitan Statistical Areas and where possible, Primary Metropolitan Statistical Areas as the highest level of aggregation (not Consolidated Metropolitan Statistical Areas which are much larger).

$$H_{c_t} = \sum_{t=1}^{T} \frac{P_t}{P_c}\left(\frac{E_c - E_t}{E_c}\right)$$

P represents total population of the geography *t*, *c*, or *m*.

These two indices can be combined produce a total *H* Index for the metropolitan area which is equal to the *H* Index calculated for the metropolitan area at the tract level, H_{m_t}.

$$H_{m_t} = \sum_{t=1}^{T} \frac{P_t}{P_m}\left(\frac{E_m - E_t}{E_m}\right) = H_{m_c} + \sum_{c=1}^{C} \left(\frac{P_c}{P_m}\right)\left(\frac{E_c}{E_m}\right) H_{c_t}$$

I analyze the percentage of total metropolitan area segregation that can be attributed to cross-city segregation as opposed to within-city segregation. I have one observation per metropolitan area in 1980, 1990, 2000, and 2011. The dependent variable in my analyses is the share of total segregation in a metropolitan area that is determined by segregation across cities versus within them:

$$share_across = \frac{H_{m_c}}{H_{m_t}}$$

My argument is that city politics affects segregation patterns. Because I only have one measure of segregation for each metropolitan area, I analyze the effect on segregation of city politics in the city with the largest population in the metropolitan area. For example, in the Detroit-Warren-Livonia metropolitan area, I estimate the relationship between Detroit's city expenditures and the share of metropolitan segregation that is attributed to whites living in different cities than nonwhites (which happens to rise from 51% to 88% between 1970 and 2011). Table 5.1 provides aggregate descriptive statistics for the central cities versus non-central cities in my analysis as of 2011.

Table 5.1: Central vs. Non-Central Cities, 2011

	Central Cities	Suburbs
% White	58%	73%
% Black	19%	9%
% Latino	16%	12%
% Asian	4%	4%
% in Poverty	21%	12%
% Renters	47%	32%
Median HH Income	$42,796	$61,670
% Wealthy	9%	13%
N	323	4,145

The table reveals that suburbs are whiter, wealthier, and filled with more homeowners than central cities.

In Chapter 4, I argued that in the postwar period, white homeowner neighborhoods felt threatened by increasing electoral contestation by minority candidates and the successes of the open housing movement. Public opinion surveys reveal that racial and income groups are divided over the proper size of government. Further, studies have shown that white opinion on government spending is powerfully shaped by attitudes toward the group perceived to be the beneficiaries of the spending (Nelson and Kinder 1996). During the 1960s and 1970s many central cities became associated with rising crime rates (Wilson 1987). Today, whites link crime and criminality with blackness (Peffley Shields, and Williams 1994; Gilliam and Iyengar 2000, Gilliam et al 1996). For wealthy, white, homeowners with the ability to choose suburban living, it is plausible that the election of minority mayors, increases in the municipal budget, and shares of the budget going toward policing in central cities all may have played a role in encouraging segregation across city lines.

To analyze these relationships, I regress the share of metropolitan area segregation determined across cities on independent variables capturing political and policy control in the

central city. The first is a variable noting whether or not the central city had a *Minority Mayor* (African American, Hispanic, or Asian) at any point in the decade prior to the year in which segregation is measured. These data are from a number of different sources, including Vogl (2014), Hopkins and McCabe (2012), and my own research using websites and newspaper accounts of elections. The variable is a dummy variable coded 1 if the central city had a minority mayor and coded 0 if the mayor was white in all years of the prior decade. Next I add two spending measures: inflation-adjusted *Direct General Expenditure Per Capita* and the proportion of the city budget spent on *Policing.*[104] These variables come from the Census of Governments State and Local Government Finance files from 1977 to 2012.[105] The data are collected in years that end with 2 and 7 and I used linear interpolation to generate estimates of city expenditures in 1980, 1990, 2000, and 2011 to match the Census population data. I add the natural log of the *Population* as a control because large cities have different spending patterns than small cities and size may affect segregation patterns by offering residents greater ability to sort themselves into like neighborhoods. Finally, I add a measure of the *Violent Crime Rate* in the central city to capture local conditions to which both policy and movers might have reacted.[106] These data represent 209 metropolitan areas and include a total of 618 observations. Summary statistics are included in appendix Table A5.1.

There is an obvious endogeneity problem with the assertion that city elections and budgets can affect residential locations. That is, we know that as home-owning whites choose to

[104] Police protection expenditures include, "expenditures for general police, sheriff, state police, and other governmental departments that preserve law and order, protect persons and property from illegal acts, and work to prevent, control, investigate, and reduce crime" Pages 5-58 in The U.S. Bureau of the Census Government Finance and Employment Classification Manual available at: http://www2.census.gov/govs/pubs/classification/2006_classification_manual.pdf

[105] [105]Available at http://www2.census.gov/pub/outgoing/govs/special60/. Filename is "_IndFin_1967-2012.zip"

[106] These data are from the Department of Justice Uniform Crime Reporting Program: Offenses Known and Clearances by Arrest reports for 1980, 1990, 2000, and 2011.

locate in the suburbs as opposed to central cities, the remaining central city population will have different policy and candidate preferences. The success of black mayoral candidates in this scenario is what Friesema (1969) called the "Hollow Prize." To attempt to mitigate problems this pattern might cause for the analysis, the mayoral data are measured in the decade prior to the segregation data and all of the remaining measures are lagged 10 years. Additionally, my analyses include fixed effects for metropolitan area, so that the estimated effects of politics are within, rather than across areas.

Is it the case that politics favoring nonwhite and poor preferences in central cities is associated with additional cross-city segregation? In short, yes. Table 5.2 presents the results.

Table 5.2: Effect of City Spending Patterns on Share of Metropolitan Segregation Attributed to Cross-City Segregation

	Racial Segregation			Renter Segregation			Wealth Segregation		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Politics favoring minorities & renters									
Minority Mayor	0.032	0.01	0.01	0.019	0.01	0.08	0.027	0.01	0.01
Direct General Expenditure Per Cap	0.052	0.01	0.00	-0.004	0.01	0.58	0.013	0.01	0.07
% Policing	0.723	0.14	0.00	-0.223	0.12	0.06	0.458	0.12	0.00
Controls									
Population (logged)	0.046	0.03	0.12	-0.057	0.03	0.03	-0.013	0.03	0.60
Crime Rate	0.566	0.13	0.00	0.134	0.11	0.24	0.159	0.11	0.15
Constant	-0.380	0.35	0.28	1.051	0.31	0.00	0.341	0.30	0.25
Number of observations	618			618			618		
Number of MSAs	209			209			209		
R^2 (within)	0.211			0.035			0.078		

Note: OLS Regressions, fixed effects for metro area included in all models
Minority mayor refers to previous decade, all other measures lagged 10 years

Table 5.2 tells a consistent story. When central cities elect minority mayors, when the spend more money, and when a larger proportion of their budget is spent on policing a larger proportion of the metropolitan area's total segregation along race and class lines is accounted for across cities rather than within them. In short, more liberal policy in the central city leads to more segregation across city lines while more conservative spending patterns in center cities lead to less. As Table 5.1 makes clear, non-central cities are whiter, wealthier, and more heavily populated with homeowners than central cities. This suggests that it is wealthy whites who make the choice to reside outside of the central city when policies favoring poor and minority interests are enacted. Conversely, wealthy white residents choose to remain in the central city when budgets are more austere. Overall, the results are strongest and most consistent for racial segregation. As has been true throughout this book, race is the clearer dividing line.

With regard to racial segregation in particular, the results are powerful. If we compare, on the one hand, a city with a white mayor in the 25th percentile of the distribution on per capita spending and police expenditure, to one with a minority mayor and in the 75th percentile on the

spending measures, the metro-area racial segregation accounted for across cities increases from 35% to 46%. This is equivalent to the difference between the patterns of segregation in the Wichita, Kansas area (*share_across_race* = 0.355), and the Waco, Texas area (*share_across_race* = 0.468) or the Charlotte, North Carolina area (*share_across_race* = 0.358) and the Portland, Oregon area (*share_across_race* = 0.465).[107]

Land Use Regulation and Suburban Segregation

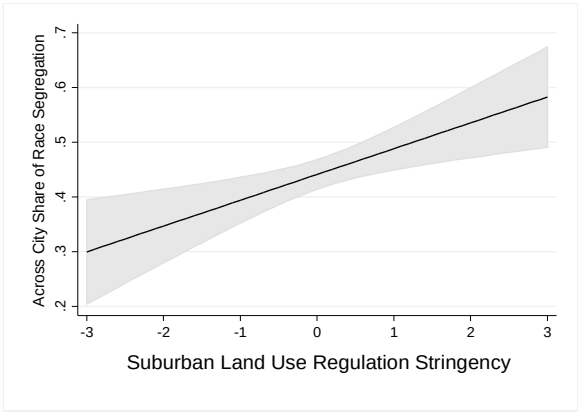
A number of scholars have emphasized the increasing role of land use regulation in the maintenance of segregation (Rothwell 2011, Pendall 2000, Orfield 2002). Scholars have often argued (although not demonstrated), that this tendency has generated a shift from the predominance of racial segregation toward class segregation (Mieszkowski and Mills 1993, Fischel 2004). The work that empirically investigates the relationship between land use regulation and segregation (e.g. Rothwell and Massey 2009, Glaeser and Ward 2006, Berry 2001) has not made a distinction between segregation within cities and segregation across them. This is an important omission, because homogenous suburban municipalities ought to be able to utilize land use regulation much more effectively than homogenous neighborhoods within cities, as municipalities wield more political power. If my argument is correct, that whites and homeowners seek to use local policy to protect home values and control the distribution of public goods, then metropolitan areas with more intense land use regulation in the suburbs should also have greater race and class segregation across cities. This is exactly what I find.

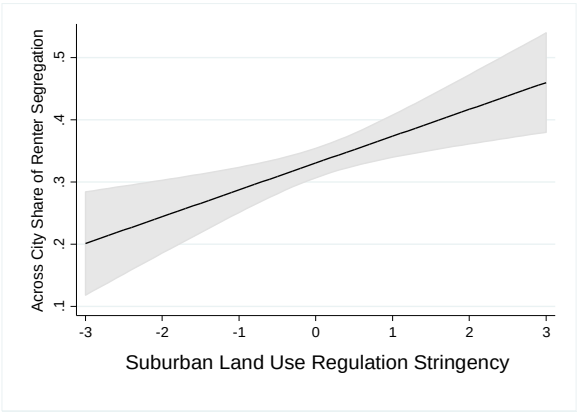
To provide evidence of this link, I use the Wharton Residential Land Use Regulatory Index (WRLURI) developed by Gyourko, Saiz, and Summers (2008). This index is built from a 2006 survey of local governments regarding the characteristics of the regulatory process, rules of

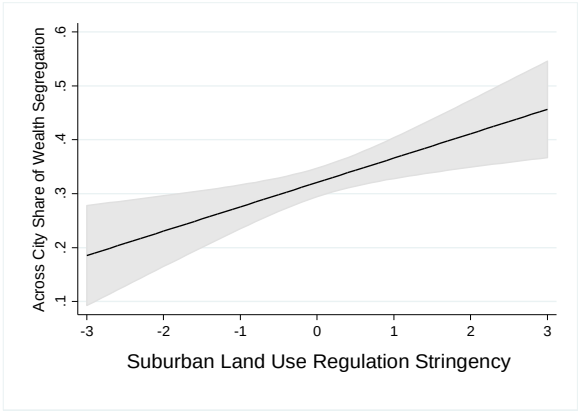
[107] These statistics are for the year 2011.

local residential land use regulation, and regulatory outcomes. These data were combined to measure the, "stringency of the local regulatory environment in each community" (Gyourko et al. 2008, p3). The survey contains data for more than 2,700 municipalities. For each metropolitan area, I determined the average WRLURI for all suburban communities. I then calculated the difference between the center city WRLURI and suburban WRLURI. This difference measure provides an estimate of the degree to which suburban municipalities have more stringent land use regulations than the central city for each metro area. I combined these data with the segregation measures described in the previous analyses – the share of the metropolitan area segregation accounted for across cities rather than within them. The WRLURI data are only available at one point in time, so I analyze the correlation between each region's *Share Across* and the *WRLURI Difference* in 2011 using OLS regression. Figure 5.3 displays the marginal effect of suburban land use regulation stringency on race, renter, and wealth segregation across cities.

Figure 5.1: Correlation Between Suburban Land Use Regulation Stringency & Segregation Across Cities







Suburban land use controls are significantly related to the degree to which segregation is accounted for across rather than within cities in metropolitan areas. The graphs also make clear that there is no difference between the effects of land use regulation on race versus class segregation. They are equally effected.

I've argued that white homeowners institutionalized segregation in order to protect their public goods and property values. The result of these policies in the post-war period has been to increase the disparity in service provision across cities. To show this, I draw on the same spending and segregation data described in the previous section. First, I aggregate all inflation-adjusted expenditures per capita by metropolitan area, for each year. This total expenditures per capita variable represents the collective dollars spent by municipal governments in a metropolitan area. I divide each municipality's expenditure by this total to generate the share of metropolitan spending accounted for by each city. I calculate a similar measure for population, generating the share of metropolitan population accounted for by each city. The ratio of these two quantities, the *Spending Equity Ratio*, is my first dependent variable.

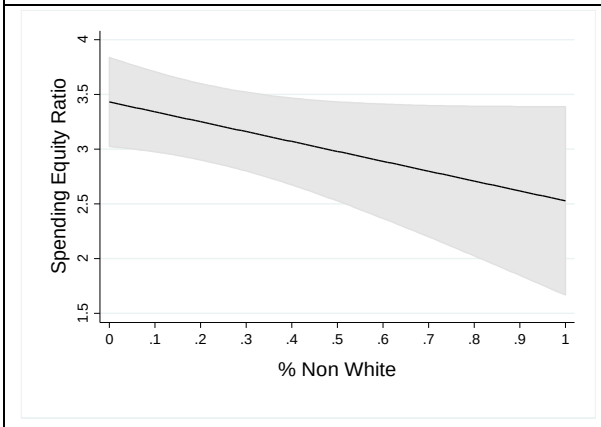
$$Spending\ Equity\ Ratio_j = \frac{E_j/E}{P_j}$$

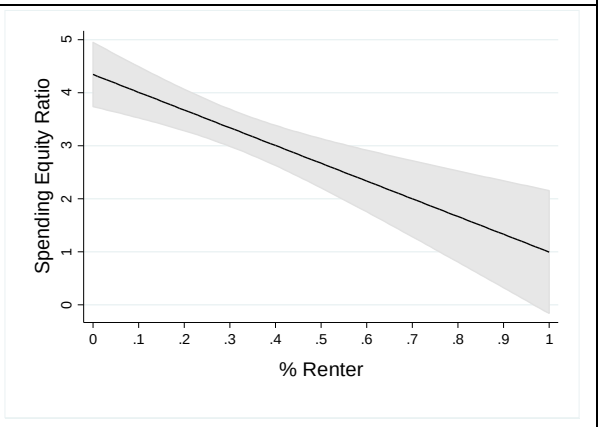
Where E_j is the per capita expenditure by city j, E is the total expenditures in the metropolitan area, and P_j is the share of the metropolitan population represented by city j.

This ratio measures the disparity between the percentage of the population represented by a city and the percentage of total resources received by that population. If resources are distributed exactly equally across the population, the ratio takes a value of 1; values less than 1 indicate that the community receives fewer resources than its population size would predict, and values greater than 1 indicate an abundance of resources. Between 1972 and 2012, this measure averaged 0.4 for central cities and 2.5 for suburbs.[108] Suburban residents receive two and a half times the resources that their population share justifies, while central city residents receive less than half of the amount of resources that their population share justifies. This is the case despite the fact that central cities spend more, on average, per resident than do suburbs. Unsurprisingly, communities with larger populations of racial and ethnic minorities and more renters have a lower *Spending Equity Ratio*. Regressing the *Spending Equity Ratio* on the share of the city that is *Nonwhite* and the share that *Rents* their homes, including fixed effects for years and errors clustered by metropolitan area, yields Figure 5.2.

[108] Calculated for all cities with more than 1,000 residents and all metropolitan areas in which I have data on more than one city.

Figure 5.2: Effect of Race and Class on Spending Equity





Given that cities with more homeowners and more white residents are more likely to garner a larger share of total resources spent in metropolitan areas, we should also expect that metropolitan areas with more segregation along race and class lines will witness more variation in spending from city to city. This is exactly what I find. My dependent variable in this analysis is a measure developed by Rhode and Strumpf (2003) called the coefficient of variation (CV). The CV captures the degree of heterogeneity in spending for a metropolitan area. It is calculated as the ratio of the standard deviation of spending to the mean of spending.

$$CV_{msa} = \frac{\sqrt{\sum_j P_j \left(E_j - M\right)^2}}{M}$$

Where E_j is the per capita expenditure of city j, M is the mean per capita expenditure for all cities in the metropolitan area, and P_j is the share of the total metro area population in city j. Rhode and Strumpf (2003) use this measure (calculated for the entire nation, not by metropolitan area) to show that over time, governments across the United States have grown more alike in their spending. I find the same – the mean CV declined about 17.5% between 1972 and 2012, from

1.32 to 1.09. However, more segregated metropolitan areas changed more slowly than less segregated areas. To see this, I regress the CV on racial, renter, and wealth segregation across cities (H_{m_c}). I add fixed effects for year to account for the declining time trend. Table 5.3 presents the results.

Table 5.3: Correlation Between Spending Heterogeneity and Segregation

	Column 1		
	β	Std. Err	P>|t|
Racial Segregation Across Cities	1.02	0.321	0.001
Renter Segregation Across Cities	1.83	0.661	0.006
Wealth Segregation Across Cities	-0.086	0.917	0.925
Constant	1.295	0.066	0.000
N	3149		
R^2	0.031		

Note: Fixed effects for year included but not presented.

The data reveal that metropolitan areas with more racial and renter segregation across cities – that is, where whites/ nonwhites, renters, and owners tend to live in different municipalities, we see more heterogeneity in municipal budgets. Combined with the results presented in Figure 5.2, we can see that communities with large populations of renters and racial minorities in segregated metropolitan areas have access to a much smaller share of the total dollars spent by local governments. Segregation is correlated with inequality; exactly as its architects intended.

Conclusion

Even after decades of progressive change in racial attitudes and growing concern over income inequality, America remains a segregated nation. Increasingly, segregation along race and class lines has occurred among cities rather than within them. I have argued that city politics has played a role in this change. Overall, whites and the wealthy individuals seek smaller, less

active local governments. When city policy does not favor their interests, these types of residents are more likely to trade homogenous neighborhoods within cities for homogenous cities instead. When central cities in metropolitan areas have more active policy agendas, when they spend more on community development, and when property taxes are higher, we see greater segregation across city lines. Whether this is because white homeowners leave central cities or never move in, the result is a higher degree of separation between cities in metropolitan areas. These patterns become fixed by suburban land use regulations that shape the character and structure of these communities.

Chapter 6: Segregation and Public Goods Provision, 1982-2012

Chapter 5 revealed that suburbanization has produced inequalities in spending patterns from city-to-city and I have argued that this was precisely the goal segregations' proponents. But segregation has another set of consequences that we might say were unintended; consequences for the polarization of politics at both the local and national levels. This chapter and the next make a case for this claim.

Many United States cities function without regular problems. They have well-kept roads, sewers that never overflow, and public parks with swing sets and restrooms. Others, however, struggle to maintain balanced budgets, fail to adequately equip or staff their police forces, and offer little assistance to residents of limited means. What explains these differences? One obvious answer is simply wealth. The history of suburbanization detailed in previous chapters suggests that whites and homeowners have ensconced themselves in homogenous municipalities. Given the strong correlation between race, property ownership, and wealth, income differences across communities could explain much of this variation. Except they don't. Although the relationship is statistically significant, the correlation between city level median income and per capita direct general expenditure is only about 0.037 in my data.

At a very basic level, the generation of public goods requires cooperation. Why is it then that some cities find it more difficult to cooperate than others? Scholars have identified racial/ethnic diversity and changes in diversity as prime suspects in determining under-provision of public goods (e.g. Alesina et al. 1999, Hopkin 2009). Nonetheless, diversity alone does not generate a lack of cooperation in city politics. It is only when cities are also segregated along racial lines that we see lower public goods provision. Segregated places are politically-polarized places. The gulf between whites and minorities in segregated places makes it less likely that

they will find common ground in support of a bundle of taxation and expenditures, driving down collective investment. It is segregation, not diversity that contributes to inequality.

I provide evidence for this argument using election data from 25 large cities between 1990 and 2010 and demographic data matched to city finance data from 1982 to 2012 in more than 3,000 cities. To handle the problem of endogeneity in the finance analysis, I instrument for segregation using the number of waterways in a city. I find that segregated municipalities spend less on a wide range of public goods. This lower spending has consequences. In the final section of the chapter, I find that racially segregated cities also have more sewer overflows per capita.

I focus here (and in the next chapter) on racial segregation alone. A series of tests revealed that renter and wealth division do not produce similar results. These findings are bolstered by the historical evidence which indicates that it is race and not class division that generates the starkest conflicts in city politics. Throughout, I control for indicators of wealth and homeownership to ensure that the results are not conflating race and class.

Literature and Hypotheses

Local politics, more so than national or state politics, concerns battles over space. This is because local governments control the location of negative and positive externalities (like pollution-producing factories or public parks) and also because many of the functions that local governments provide are allocational in nature (e.g. where police officers will be deployed and which roads will be repaved). One of the few powers that is reserved nearly exclusively by local government is that of zoning or planning. As a result, geographic areas within cities (e.g. neighborhoods) are frequently important actors in municipal politics.

At the same time, neighborhoods in America remain highly segregated along racial lines (see Chapter 1). Although neighborhood racial segregation has lessened in recent decades, today, the typical white American lives in a neighborhood that is overwhelmingly white, while Black, Latino, and Asian Americans live in substantially more integrated places (Logan and Stults 2011).[109] These patterns have created stark divides between white and nonwhite communities (Enos 2011). When a city is residentially segregated by race, issues cleave along racial and not just spatial lines (Massey and Denton 1993).

Furthermore, in segregated cities, divisions across racial groups are likely to be exacerbated because the political priorities and opinions of racial groups are likely to be more divergent than they are in integrated places. Neighborhood racial isolation is associated with a high degree of racial intolerance, resentment, and competition among all racial groups (Oliver 2010, Chapter 7). This correlation is due to both self-selection and interpersonal interactions (Rodden 2010). When deciding where to live, people with racially intolerant attitudes often seek same race neighbors (Charles 2003, Boustan 2012) either because they want to minimize contact with other race individuals (Massey and Denton 1993) or because they associate other race neighborhoods with poor neighborhood quality on dimensions such as schools, crime, and property values (Helper 1969, Ellen 2000, Bayer, Ferreira, and McMillian 2007, Krysan et al. 2008). However, living in different types of neighborhoods may also change individuals' perspectives. In integrated neighborhoods, regular, casual interaction may work to counteract dominant, negative stereotypes (Allport 1954, Oliver and Wong 2003). The result of both population sorting and/or neighbors' influence is that individuals who live in homogeneous

[109] African Americans, Latinos, and Asians live in neighborhoods that are comprised of 22%-46% of their own group.

neighborhoods are more likely to harbor negative stereotypes about other groups (Oliver 2010, Oliver and Wong 2003).

Yet, at higher levels of geography (e.g. in cities, counties, and metropolitan areas) it is integration or diversity that correlates with intolerance, prejudicial attitudes, increased racial tension, less cooperative behavior, and lower spending on public goods (Key 1949, Glaser 1994, Branton and Jones 2005, Taylor 1998, Campbell et al. 2006, Alesina et al. 1999, Vigdor 2004, Hopkins 2009, Poterba 1997). As a result, racial competition, racial resentment, and racial conservatism are positively correlated with homogeneity at the neighborhood level, but negatively correlated with homogeneity at the city level (see Oliver 2010 for a detailed account of these conflicting patterns).[110] A severely segregated city is one that is diverse overall and has many homogeneous neighborhoods – both characteristics which point towards a high degree of racial conflict.

This higher degree of racial conflict in segregated cities has obvious political implications. Levine (2014) has found that racial segregation is strongly predictive of partisan political divisions in metropolitan areas and that these political divides result in an unwillingness to cooperate on metropolitan-wide policy solutions. We can expect a similar pattern at the city level. First, in segregated cities, racial groups should be more divided with respect to political priorities. Second, diverse but divided cities may be less able to come to a consensus about the production of basic government services, and thus, will be less supportive of public goods provision. This second hypothesis speaks directly to the claim that diversity drives down

[110] There are a few exceptions to this pattern. A handful of scholars have *not* found that diversity increases tolerance at the neighborhood level. Gay (2006) and Oliver and Mendelberg (2000) find no relationship between neighborhood racial context and racial attitudes. Enos (2016) shows that that homogeneity decreases voter turnout among whites and also decreases support for conservative candidates. Cho, Gimpel and Dyck 2006 find that homogeneity decreases turnout among Asian Americans in some cases, but increases it (or has no effect) in others. Leighly and Vedlitz (1999) find that homogeneity correlates positively with turnout for whites.

collective investment (Alesina et al. 1999). As Benoy Jacob (2013) has persuasively argued, not all diversity is equivalent. When whites and nonwhites live in the same city, the pattern of residential integration ought to factor into expectations about public goods expenditures. White and nonwhites may live as next door neighbors, but they also may not. If segregation represents preferences or attitudes that are incompatible with collective investment, then uneven distribution of groups, not diversity per se, ought to correlate with lower public goods spending.

Segregation and Political Polarization

In municipal politics, vote patterns and policy priorities are shaped by racial cleavages more so than *any* other demographic division (Hajnal and Trounstine 2013a, Hajnal and Trounstine 2013b, Hajnal and Trounstine 2014). While ideology, partisanship, and class all play important roles in determining vote choice and support for municipal administrations, conflicts among racial groups are predominant. If segregated cities are more politically polarized, these racial divides should be most pronounced in places with a high degree of residential segregation. To determine whether or not this is the case, I analyze the relationship between residential segregation patterns and racial divisions in mayoral elections in the nation's largest cities between 1990 and 2010.

To estimate the effect of segregation on racial polarization, I use a dataset compiled by Hajnal and Trounstine (2014) that measures support for winning mayoral candidates across different racial groups in primary and general elections in large cities. The data include 91 separate contests from 25 cities. Vote by race data were compiled from a combination of exit polls, pre-election surveys, homogenous precinct analyses, and ecological inference.[111]

[111] These data are described completely in Hajnal and Trounstine (2014).

Summary statistics and a list of cities included in the analysis are provided in appendix Tables A6.1 and A6.2.

For each election, I calculated the difference in support for the winning candidate between black and white voters, Latino and white voters, and black and Latino voters. The dependent variable in this analysis is the absolute value of the largest difference in support for the winning candidate between any two racial groups. For instance, in Philadelphia in 2003, exit polls reported that 24% of white voters supported the winner, John Street, compared to 88% of black voters, and 47% of Latino voters. In this election the black-white divide was 0.64, the Latino-white divide was 0.23, and the black-Latino divide was 0.41. Therefore, the dependent variable takes the value of the black-white divide, 0.64. In 62 of the 91 contests, the largest divide was between black and white voters, in 13 contests it was the divide between Latino and white voters, and in 16 contests the largest divide was between black and Latino voters.[112] The distribution of racial divides across cases is listed in appendix Table A6.2.

As described in Chapter 1, my primary independent variable is a measure of segregation called Theil's *H* Index. The *H* Index measures the degree to which the diversity in each neighborhood differs from the diversity of the city as a whole, expressed as a fraction of the city's total diversity and weighted by the neighborhood's share of the total population.

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents the total population of neighborhood *n* or city *c* and E is the entropy of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city, and 1 where all neighborhoods contain only one group.

[112] As an alternate measure of division, I took the difference in support between white voters and the average of support among black and Latino voters. The results are extremely similar.

I calculated the *H* Index for all United States cities using Census-tract level demographic data from the 1980, 1990, and 2000 Censuses of Population and Housing and from the 2011 American Community Survey.[113] To start, I use four groups in the calculation of entropy: white (non-Hispanic), black (non-Hispanic), other (non-Hispanic), and Hispanic/Latino.[114] I then combine Blacks, Hispanics, and Other races into a single nonwhite group for comparison. For reference, the mean *H* Indices for each city in the analysis are shown in appendix Table A6.2.

I include a number of control variables in addition to the *H* Index. One of the primary arguments in the literature is that racially and ethnically diverse populations will have heterogeneous political preferences which then drives low spending on public goods. If this is the case, we should see more racial polarization in the vote as diversity rises. Thus, I include the proportion of *Blacks*, *Latinos*, and *Asian Americans* in the city and a measure of *Diversity* known as the Herfindahl Index[115]:

$$Diversity = 1 - \sum_{r=1}^{R} \pi_r^2$$

I also include control variables that are shown by Hajnal and Trounstine (2014) to affect racial polarization in voting and which may also be correlated with segregation. I account for the *Median Household Income*, proportion of the population *Renting* their homes, proportion of the population with a *College Degree*, the race of the candidates in the election (a dummy variable coded 1 if the election featured *Biracial* candidates), a measure noting whether or not the

[113] Tract-level data for 1980, 1990, and 2000 come from a proprietary product developed by GeoLytics called the Neighborhood Change Database (NCDB), which matches and normalizes Census tracts over time. The data from the 2011 American Community Survey (ACS) are available for download through the Census ftp server located at http://www2.census.gov/.

[114] The 1980 tract-level data only disaggregate the non-Hispanic population into Whites, Blacks, and Others, so I am unable to include Asians as a separate group.

[115] This calculation includes five racial groups: white (non-Hispanic), black (non-Hispanic), Asian (non-Hispanic), Hispanic, and other.

election was *Non-partisan*, an indicator for *Primary* elections, and the size of the total *Population* (logged). Finally, I include fixed effects for year and region and random effects for cities.

In Model 3, I also add a measure of the average *Ideology* among the city's white residents to determine whether or not segregation is merely a proxy for a conservative white population. This measure was constructed using General Social Survey (GSS) data from 1998, 2000, 2002, 2004, 2006, and 2008. Using restricted access data, I geo-coded each respondent in the GSS to his/her city of residence. I then took the mean ideology score for each city's white respondents for each year (higher values indicate more conservative respondents).[116] I interpolated ideology for odd years and then merged these data to the racial polarization data set. In order to preserve as many observations as possible, I matched GSS data from the most recent year for each election.

The results presented in Table 6.1 offer strong support for the hypothesis that more segregated cities are also more politically polarized.

[116] I dropped city/years from the GSS that only contained a single respondent.

Table 6.1: Racial Polarization in Segregated Cities

	Racial Divide w/ Multi-Group Segregation Index			Racial Divide w/ Two-Group Segregation Index			Racial Divide w/ Ideology control		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Multi-group H Index	0.932	0.39	0.02						
White/nonwhite H Index				0.756	0.30	0.01	0.835	0.30	0.01
Diversity	0.385	0.36	0.29	0.518	0.32	0.11	0.584	0.32	0.07
% Asian	-0.115	0.53	0.83	0.120	0.56	0.83	-0.004	0.52	0.99
% Black	-0.432	0.27	0.11	-0.237	0.22	0.27	-0.133	0.21	0.53
% Latino	-0.191	0.26	0.46	-0.059	0.25	0.82	0.095	0.28	0.73
Median HH Income (1000s)	-0.004	0.00	0.52	-0.007	0.00	0.32	-0.002	0.00	0.81
% Renters	-0.580	0.42	0.17	-0.806	0.43	0.06	-0.419	0.45	0.36
% College Educated	0.328	0.71	0.65	0.723	0.73	0.32	0.123	0.87	0.89
Biracial contest	0.210	0.04	0.00	0.208	0.04	0.00	0.192	0.04	0.00
Nonpartisan Election	-0.090	0.07	0.18	-0.089	0.07	0.18	-0.034	0.06	0.60
Primary Election	-0.092	0.03	0.00	-0.09	0.03	0.01	-0.071	0.03	0.02
Population (logged)	0.035	0.06	0.53	0.048	0.05	0.38	-0.011	0.06	0.86
White Ideology							-0.051	0.03	0.11
Constant	-0.242	0.57	0.67	-0.393	0.56	0.49	0.236	0.61	0.70
Wald χ^2	187.12		0.00	189.68		0.00	222.92		0.00
N	91			91			86		

Note: Multi-level mixed-effects linear regressions with fixed effects for region and year, and random effects for cities.

The relationship between segregation and political polarization is powerful. A city in the 10th percentile of the segregation distribution can be expected to have a 35 percentage point divide between different racial groups' support for the winning candidate, while a city in the 90th percentile of segregation has a predicted racial divide of 63 percentage points.[117] These results hold even with the inclusion of racial demographics. Segregation, not just diversity, matters for polarization. The data also indicate (comparing columns 1 and 2) that there is no significant difference in accounting for segregation among multiple racial groups as opposed to accounting

[117] Estimates were generated from the regression presented in column 1 with all other variables held at their mean values. Predicted effects were generated using the "margin" command in Stata 12.

for segregation of whites from nonwhites.[118] This makes sense given that whites are much more likely to live in homogenous neighborhoods than are other racial and ethnic groups and given that the most pronounced political division is typically between whites and one or more minority groups, rather than among minority groups. These results suggest that political polarization depends on the degree to which *white* residents live in exclusively white neighborhoods.

I have argued that segregation generates political divisions because the politics of space become intertwined with race. It is possible though, that segregation is simply correlated with a more ideologically conservative white population which then generates divides in support for candidates. As the third column reveals, the relationship between segregation and polarization appears to be unaffected by the conservatism of the white population. In fact, the relationship between ideology and polarization is such that cities with more conservative white populations have smaller racial divides, underscoring the conclusion that racial polarization is not driven by ideological divisions. In the next section, I ask whether or not this polarization extends beyond support for candidates to a lack of consensus over policy. In short, I find that it does.

Diversity and Segregation in the Aggregate

Scholars have provided evidence that racially diverse places and those that are becoming increasingly diverse spend fewer public dollars on productive public goods (Alesina et al. 1999, Hopkins 2009). I have argued that segregation, not just diversity, should matter in municipal politics. In the first section of this chapter, I showed that segregation is related to political polarization, even after accounting for racial demographics. If it is the case that segregated populations are less able to come to a consensus over citywide policy decisions, we should also

[118] The 95% confidence intervals for these coefficients are nearly completely overlapping. Additionally, adding both coefficients to the same equation and running a post-estimation Wald test of equality indicates no significant difference.

see less support for government spending in segregated cities after accounting for racial demographics.

In order to analyze this hypothesis, I draw on the Census of Governments city and township expenditure data from 1982, 1987, 1992, 1997, 2002, 2007, and 2012.[119] To these data, I merged interpolated data from the 1980, 1990, 2000, and 2010 Census of Population and Housing, and from the 2007-2011 American Community Survey (ACS). In the broadest sample, I have data for 3,113 cities, which range in size from about 750 residents to more than 8 million.[120] To capture overall spending on public goods, I analyze the effect of segregation on per-capita *Direct General Expenditures.*[121] I follow this with analyses of operations expenditures on specific budgetary categories including *Roads and Highways, Police, Parks, Sewers*, and a combined category of *Welfare, Health, and Housing and Community Development.*[122] I also analyze per capita *Revenues* coming from the city's own residents (as opposed to intergovernmental revenues) as an indication of the burden of funding the populous is willing to bear.[123] All spending data are in thousands of 2012 dollars. Summary statistics are shown in appendix Table A6.3. As above, the primary independent variable is the *H* Index to measure segregation. In the tables and figures below, I present results using the two-group (white and nonwhite) index; results from the multi-group index and isolation index are very similar.

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119 Available at http://www2.census.gov/pub/outgoing/govs/special60/. Filename is "_IndFin_1967-2012.zip".
120 Data are available for many more cities in 2012 than in prior years (largely because I have Census data for more places in 2011). I only use observations from 2012 that are also included in 2007 to create a consistent panel.
121 All analyses are restricted to cities with non-zero expenditures in the category in question because the data do not distinguish between zero expenditures and missing data.
122 Operations expenditure totals were generated by taking the total spending in each category less any capital expenditures in that particular year. The category of welfare, health, and housing/community development represents the primary expenditures by cities used to directly support people in economic need.
123 In contrast, the categorical expenditure variables include all spending on a certain target regardless of the source of the funds.

To account for the alternative explanation that diversity drives down spending, the analyses include the proportion of the population that is *Black*, *Asian*, and *Latino* as well as a measure of overall *Diversity*. Controlling for demographics also helps account for the fact that white and minority preferences for government spending differ. Racial and ethnic minorities support more government spending than whites on a large number of programs at all levels of government (Hutchings and Valentino 2004). In the aggregate then, we might expect cities with larger populations of racial and ethnic minorities to support more per capita expenditure, just as Boustan et al. (2013) find. But if my theory is right, cities with more segregation and similar shares of minority residents ought to witness smaller budgets and lower spending on public goods compared to cities with less segregation because the likelihood of cooperation ought to be fundamentally different in these types of places.

The analyses below also control for the total *Population* (logged), the proportion of the population *Over Age 65*, the proportion of the population with a *College Degree*, the proportion of each 100 residents *Employed as Local Government* workers, the proportion of households that *Rent* their home, and the *Median Household Income*. These controls are meant to capture demographic dimensions that affect both segregation and expenditures (through both preferences and need). For instance, we might expect cities with large populations of government workers to have higher levels of spending, while the reverse might be the case in cities with older populations. An important alternative explanation for a negative relationship between segregation and spending could be city wealth. Segregated cities might be poorer cities for some reason, and may simply have fewer resources to spend on public goods. Controlling for the proportion of the city that rents and the median household income are intended to account for

this possibility.[124] Finally, I include fixed effects for cities. This allows me to analyze the effect of segregation within the same location over time and controls for the many factors (such as age of the city, differentials in costs for service provision, taxation powers and limits, etc.) that might lead cities to differ in expenditure patterns cross-sectionally. I cluster standard errors by city. I exclude from the analyses cities with only a single Census tract because the measure of evenness is constant (by definition).

I begin, in Table 6.2, by regressing per capita *Direct General Expenditure* on *Segregation* with the controls described above. Then, in the second column, I replace *Diversity* with *5 Year Changes* in racial group shares (following Hopkins 2009) to determine whether or not changes in diversity could be the driving factor.[125] In the third column, I add the mean *Ideology* of city residents (calculated from the GSS for all city residents as described above) to account for the possibility that segregated cities are more ideologically conservative. In alternate models (not shown), I add a control for renter segregation. The coefficient is insignificant and does not affect the results presented below.

[124] In alternative analyses I tested the inclusion of proportion of the city in poverty and median home values with no change to the pattern of results.
[125] Hopkins (2009) uses 10 year changes in racial group shares. I chose 5 years in order to preserve more observations in the time-series. The results are similar with 10 year changes.

Table 6.2: Effect of Segregation on Overall Per Capita City Expenditures

	Direct General Expenditure Per Capita			Direct General Exp w/ changing demographics			Direct General Exp w/ ideology control		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Segregation	-1.266	0.218	0.000	-1.141	0.231	0.000	-1.731	0.45	0.000
Diversity	0.199	0.133	0.134				0.060	0.257	0.816
% Black	0.726	0.179	0.000	0.854	0.168	0.000	0.117	0.641	0.856
% Asian	-0.88	0.288	0.002	-1.212	0.307	0.000	-0.565	0.74	0.445
% Latino	1.634	0.171	0.000	1.721	0.19	0.000	1.560	0.394	0.000
5 yr Δ % Black				-1.918	0.691	0.006			
5 yr Δ % Latino				-1.695	0.725	0.02			
5 yr Δ % Asian				-1.389	1.073	0.196			
Median Income (1000s)	0.006	0.001	0.000	0.005	0.002	0.001	0.009	0.003	0.001
% Local Gov. Employees	-0.004	0.015	0.787	-0.007	0.017	0.683	-0.077	0.051	0.132
% Renters	0.387	0.318	0.223	0.181	0.311	0.560	-0.123	0.693	0.860
% Over 65	0.458	0.597	0.443	0.639	0.453	0.158	-1.139	0.887	0.200
% College Grad	5.114	0.434	0.000	5.806	0.433	0.000	6.66	1.23	0.000
Population (logged)	-0.36	0.045	0.000	-0.439	0.07	0.000	-0.551	0.097	0.000
City ideology							-0.001	0.037	0.972
Constant	3.379	0.441	0.000	4.268	0.675	0.000	6.358	1.317	0.000
N	16,831			14,284			2,524		
Number of Cities	3,113			3,113			395		

Note: Linear regressions with fixed effects for cities, robust standard errors clustered by city presented.

Table 6.2 provides strong evidence that segregation and public goods spending are negatively related, even in the presence of changing demographics, diverse populations, and conservative residents. The effects of segregation are substantively meaningful and statistically significant. Increasing the segregation index from the 25th to 75th percentile (from .01 to .10) in the base model lowers per capita direct general expenditure from $1,413 to $1,299. A difference in total spending of more than $100 per resident could dramatically affect the quality of public goods that individuals experience given that the average per capita operating expenditure on police is about $190 and about $51 on parks. In Table 6.3, I show that the depressive effect of segregation extends to individual categories of public goods spending as well.

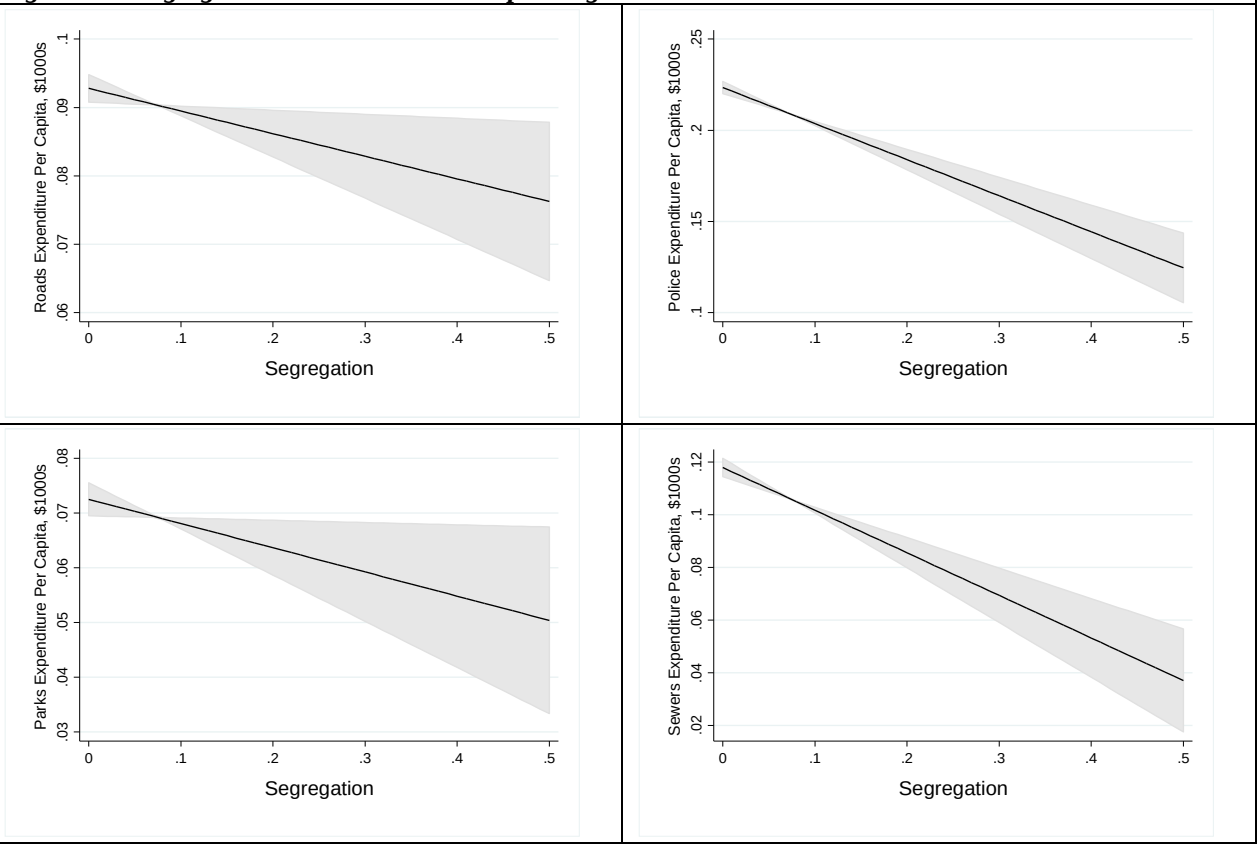
Table 6.3: Effect of Segregation on Public Goods

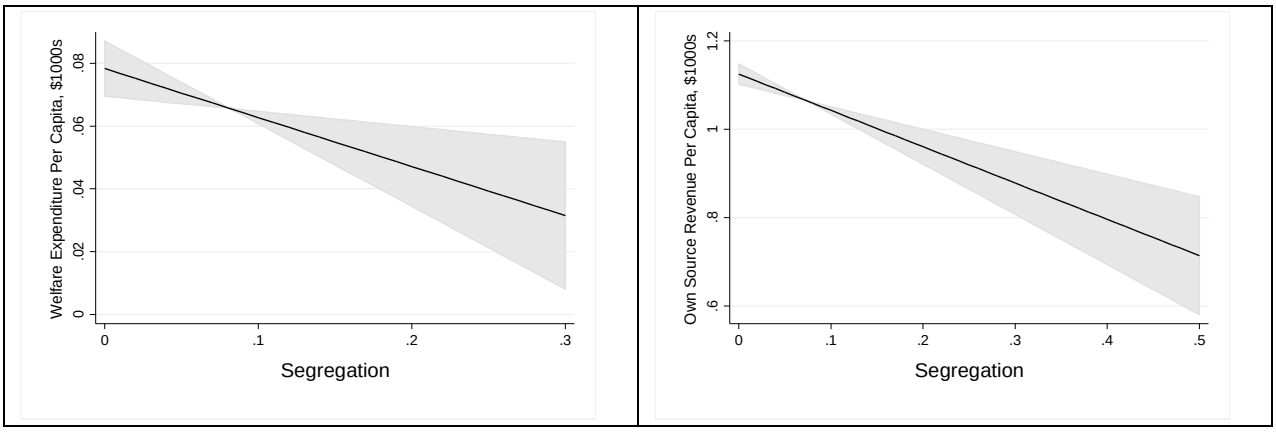
	Roads			Law Enforcement			Parks			Sewers			Housing/Welfare			Own Source Rev		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	B	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t||
Segregation	-0.033	0.01	0.02	-0.198	0.02	0.00	-0.044	0.02	0.03	-0.162	0.02	0.00	-0.156	0.05	0.00	-0.822	0.16	0.00
Diversity	0.017	0.01	0.06	0.060	0.01	0.00	0.012	0.01	0.25	0.041	0.01	0.00	-0.023	0.02	0.35	0.136	0.09	0.13
% Black	0.039	0.01	0.00	0.167	0.02	0.00	0.024	0.02	0.13	0.005	0.02	0.78	-0.013	0.07	0.86	0.321	0.13	0.01
% Asian	-0.069	0.02	0.00	-0.083	0.03	0.02	-0.069	0.03	0.01	-0.155	0.04	0.00	0.084	0.07	0.26	-0.508	0.23	0.02
% Latino	0.018	0.01	0.12	0.361	0.02	0.00	0.031	0.01	0.01	0.088	0.02	0.00	0.144	0.03	0.00	1.303	0.12	0.00
Median Income (1000s)	0.000	0.00	0.00	0.000	0.00	0.11	0.000	0.00	0.01	0.000	0.00	0.00	0.00	0.00	0.57	0.006	0.00	0.00
% Local Gov. Employees	0.000	0.00	0.81	-0.001	0.00	0.52	0.001	0.00	0.38	-0.002	0.00	0.28	-0.009	0.00	0.01	-0.006	0.01	0.64
% Renters	0.030	0.02	0.11	0.085	0.03	0.00	0.026	0.02	0.22	0.188	0.03	0.00	0.075	0.05	0.11	0.501	0.26	0.05
% Over 65	0.149	0.03	0.00	0.191	0.05	0.00	0.174	0.04	0.00	0.076	0.06	0.17	-0.081	0.08	0.29	0.648	0.47	0.17
% College Grad	0.189	0.02	0.00	0.842	0.04	0.00	0.399	0.04	0.00	0.382	0.04	0.00	0.447	0.09	0.00	4.452	0.37	0.00
Population (logged)	-0.020	0.00	0.00	-0.06	0.00	0.00	-0.006	0.00	0.02	-0.027	0.00	0.00	-0.024	0.01	0.00	-0.229	0.03	0.00
Constant	0.197	0.03	0.00	0.548	0.05	0.00	0.006	0.03	0.85	0.215	0.04	0.00	0.262	0.09	0.00	1.894	0.33	0.00
N	16,642			16,673			15,809			13,832			13,203			16,830		
Number of Cities	3,089			3,083			3,020			2,840			2,754			3,113		

Note: Linear regressions with fixed effects for cities, robust standard errors clustered by city presented.

Clearly, spending on public goods is lower in cities with greater segregation. Across all six categories displayed in Table 6.3, segregation exerts a significant negative effect. Figure 6.1 presents these results graphically.

Figure 6.1: Segregation and Public Goods Spending





Note: Figures show the predicted relationship between Theil's H segregation index and per capita spending on public goods in constant 2012 dollars. Gray shading represents 95% confidence intervals.

Tables 6.2 and 6.3 also reveal that while segregation is negatively related to public goods investment, more diverse communities are mostly associated with higher levels of spending as the positive coefficients on diversity and on percent black and Latino indicate. Given that racial and ethnic minorities are both more supportive of public goods spending and more likely to live in segregated places (which see less support for public goods), it is important to ask what the overall impact of these countervailing effects is. Table 6.4 shows how segregation affects public goods provision across the range of values of diversity. I divide the sample of cities into quintiles of percent nonwhite (with 3,366 city-years in each quintile) and then, after estimating the model displayed in column 1 of Table 6.2, I predict Direct General Expenditure per capita at the minimum and maximum values of segregation for each quintile, holding all other variables at their mean values given the quintile. Table 6.4 shows the difference in these predicted values for each quintile of percent nonwhite.

Table 6.4: Change in Direct General Expenditure Per Capita by % Nonwhite at Minimum and Maximum Levels of Segregation

Quintile of % Nonwhite	Average % Nonwhite	Average Segregation Level	Change in Predicted Direct General Expenditure Per Capita*	95% Confidence Interval
1	4%	0.030	-$490	(-$656, -$325)
2	10%	0.041	-$870	(-$1163, -$576)
3	19%	0.066	-$970	(-$1298, -$643)
4	33%	0.108	-$930	(-$1244, -$616)
5	65%	0.125	-$846	(-$1132, -$561)

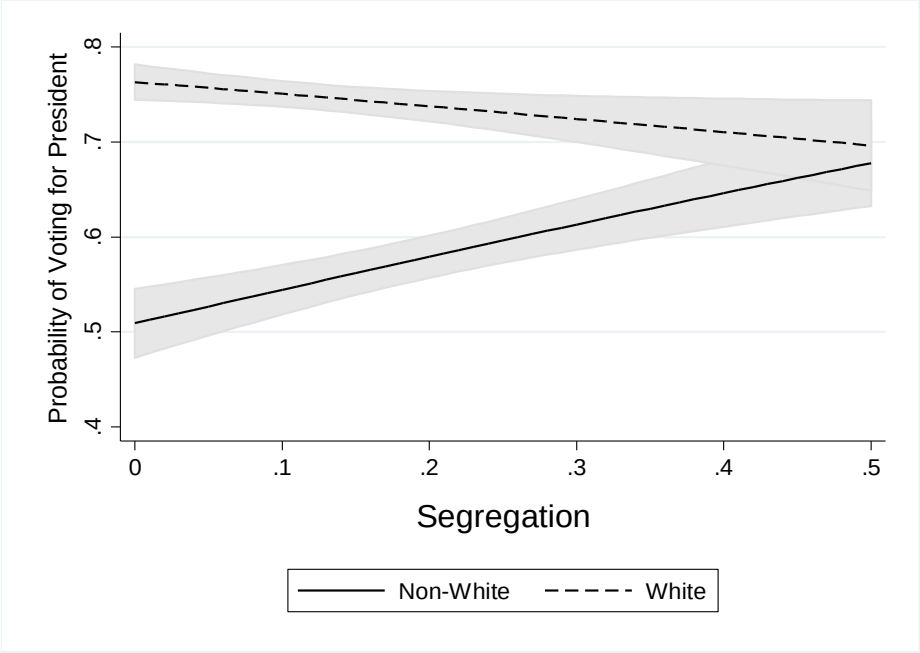
*Predicted values generated from regression displayed in column 1, Table 7.2. Change is from the minimum to maximum level of segregation within a quintile of percent nonwhite.

Table 6.4 reveals substantial declines in direct general expenditure as segregation increases, regardless of the size of the minority population. Segregation has the largest effect in cities with moderately sized minority populations (where minorities comprise 19-33% of the population), but even in majority-minority cities (where minorities make up more than 50% of the population) and cities that are overwhelmingly white, increasing segregation decreases investment in public spending. The fact that segregation has the most pronounced effect in the middle quintiles offers indirect evidence that it is white residents responding to significant minority concentrations driving the negative relationship between segregation and public goods spending. An alternative possibility is that low turnout among minority residents drives this pattern. As Figure 6.2 shows, this case is extremely unlikely, given that turnout among minority residents is actually higher in more segregated cities while turnout among whites is lower.

To test this possibility, I draw on data from the General Social Surveys conducted between 1998 and 2008; years for which I was able to determine respondents' city of residence

(see Chapter 7 for additional details on this dataset). I estimate the probability that a respondent *Voted* in the most recent presidential election. Using logistic regression, I regress this variable on the level of *Segregation* in the respondent's city. To understand how segregation operates differently for different groups, I interact the level of segregation with a dummy variable coded 1 if the respondent is *White and Non-Hispanic*, and 0 otherwise. I control for the respondent's level of *Education*, whether or not they have *Kids at home*, their *Gender*, whether or not they are *Married*, their *Income*, and whether or not they are a *Government Employee*.

Figure 6.2: Correlation between Segregation and Turnout by Race



At low levels of segregation, white turnout is much higher than minority turnout, but the lines converge as segregation increases. Furthermore, using the racial polarization dataset described in the first section of this chapter, I find that turnout and segregation are positively

correlated in the aggregate. These patterns strongly suggest that politics is more contentious in more segregated communities. Thus, a lack of participation by residents who support high spending is not likely to be the cause of lower public goods investment.

However, even with controls, one might still worry about the causal relationship between segregation and spending. I have argued that segregation should suppress public goods spending. However, it is entirely possible, perhaps quite likely, that some unmeasured set of factors affect both spending and segregation (or that the reverse is true, and spending levels affect segregation patterns). Since we cannot randomly assign segregation to determine its effect on city spending, I use an instrumental variable approach to study the relationships.

A great many factors affect residential location and the distribution of different types of residents across neighborhoods. One set of factors that affects both property values and the ability for communities to maintain a preferred degree of homogeneity are natural and manmade barriers. For instance, freeways and railroad tracks frequently divide more desirable and less desirable parts of town (Ananat 2011). But railways and freeways are often built with the intent to segregate racial communities (Bayor 1996). Instead, I focus on waterways (including large streams and rivers), which vary in number across cities and are arguably exogenous to segregation and spending given that they are not man-made. The use of waterways as an instrumental variable was introduced by Hoxby (2000) who used streams to estimate the governmental fragmentation of metropolitan areas. Cutler and Glaeser (1997) rely on Hoxby's waterways data as an instrument for metropolitan area racial segregation. My instrument differs in two ways. First, and most importantly, my data capture waterway counts and segregation patterns at the *city* level rather than at the metropolitan-area level. Secondly, I use a different source file for the waterways data and a different method for determining whether a waterway

ought to be counted within the boundaries of a community.[126] In order to use waterways as an instrument for segregation, I gathered the "rivers and streams" geographic information system map file from the National Hydrologic Remote Sensing Center which is part of the National Oceanic and Atmospheric Administration (an agency in the US Department of Commerce).[127] I added Census TIGER Line boundary files for all places in the United States as of 2000.[128] I then generated counts of waterways for each place and added these counts to the finance data described previously. Overall, the correlation between the number of waterways and the H Index is a powerful 0.37, and the F-statistic on the excluded instrument is 3,999, which is considerably higher than the typical target of 10.[129]

The current analyses use the same dependent variables as were presented in Tables 6.2 and 6.3 (per capita spending on various public goods). The number of waterways is used as an instrument for the *H* Index. Waterways are also correlated with other characteristics that are important to both segregation and spending patterns. The most important of these characteristics is the size of the population which is correlated with both the number of waterways and the level of segregation. People have settled near waterways since antiquity, and larger cities are also much more likely to be segregated than smaller cities (perhaps because there are more neighborhoods from which to choose). To account for this, I include logged population

[126] Hoxby (2000) uses a hand count of streams that are 3.5 miles in length and "of a certain width" supplemented with data from the Geographic Names Information System which lists the latitude and longitude of smaller streams. Instead, I use geographic information system maps as described in the main text and include all large streams and rivers regardless of length and width. Hoxby (2000) attributes a stream to a Metropolitan Statistical Area (MSA) if it terminates in the MSA (Rothstein 2007), whereas my analysis attributes a waterway to a community if it flows through the community at all (not just at its origin or destination).

[127] The "rivers and streams" shape file is available at: http://www.nohrsc.noaa.gov/gisdatasets/. It was most recently updated in 2008.

[128] Boundary files are available for download by state here: http://www2.census.gov/geo/tiger/TIGER2010/PLACE/2000/

[129] This F-statistic is drawn from a simple two-stage regression instrumenting segregation with waterways and including no additional controls.

as an instrument in the first stage.[130] In both the first and second stage regressions, I include the same control variables as presented in Table 6.2, with two changes. Because the number of waterways is constant in my dataset, I do not add fixed effects at the city level.[131] Instead, I include fixed effects for region and year. Secondly, I add a lagged version of the dependent variable to account for the high correlation between observations over time for the same city and the fact that local budgets are typically changed incrementally from prior years. The results from this instrumental variable approach are displayed in Table 6.5. For presentation purposes, the first stage results are relegated to appendix Table A6.4.

[130] In alternative specifications, I use the number of waterways per capita as the instrument. The pattern of the results is exactly the same.
[131] The omission of fixed effects allows for the inclusion of all cities regardless of the number of Census tracts.

Table 6.5: Effect of Segregation on City Expenditures, Instrumental Approach												
	Direct General Exp			Roads			Law Enforcement			Parks		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Segregation instrumented	-3.806	1.09	0.00	-0.385	0.05	0.00	-0.353	0.10	0.00	-0.025	0.02	0.18
Lagged DV	0.858	0.00	0.00	0.490	0.00	0.00	0.966	0.00	0.00	0.822	0.00	0.00
Diversity	-0.418	0.38	0.27	-0.027	0.02	0.15	-0.001	0.04	0.97	0.004	0.01	0.57
% Black	0.798	0.36	0.03	0.080	0.02	0.00	0.080	0.03	0.02	0.000	0.01	0.98
% Asian	-0.848	0.99	0.39	-0.088	0.05	0.07	-0.082	0.09	0.38	-0.029	0.02	0.08
% Latino	1.121	0.31	0.00	0.086	0.02	0.00	0.078	0.03	0.01	0.007	0.01	0.18
Median Income (1000s)	0.012	0.00	0.00	0.001	0.00	0.00	0.001	0.00	0.00	0.000	0.00	0.00
% Local Gov. Employees	0.276	0.03	0.00	0.017	0.00	0.00	0.020	0.00	0.00	0.002	0.00	0.00
% Renters	2.627	0.39	0.00	0.159	0.02	0.00	0.159	0.04	0.00	0.033	0.01	0.00
% Over 65	2.260	0.81	0.01	0.270	0.04	0.00	0.233	0.08	0.00	0.089	0.01	0.00
% College Grad	-0.495	0.62	0.42	-0.013	0.03	0.68	-0.051	0.06	0.39	0.045	0.01	0.00
Constant	-2.034	0.31	0.00	-0.105	0.02	0.00	-0.149	0.03	0.00	-0.026	0.01	0.00
N	2,669			25,121			25,034			23,197		
	Sewers			Welfare			Own Source Revenue					
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|			
Segregation instrumented	-0.393	0.06	0.00	-0.194	0.06	0.00	-3.344	0.95	0.00			
Lagged DV	0.082	0.01	0.00	0.936	0.00	0.00	0.712	0.00	0.00			
Diversity	0.075	0.02	0.00	0.000	0.02	1.00	-0.373	0.33	0.26			
% Black	0.054	0.02	0.02	0.065	0.02	0.01	0.686	0.31	0.03			
% Asian	-0.229	0.06	0.00	-0.008	0.05	0.87	-0.909	0.86	0.29			
% Latino	-0.048	0.02	0.01	0.045	0.02	0.01	1.01	0.27	0.00			
Median Income (1000s)	0.000	0.00	0.89	0.000	0.00	0.57	0.013	0.00	0.00			
% Local Gov. Employees	0.000	0.00	0.88	0.007	0.00	0.00	0.294	0.03	0.00			
% Renters	0.082	0.02	0.00	0.090	0.02	0.00	2.573	0.34	0.00			
% Over 65	0.344	0.05	0.00	0.109	0.05	0.03	2.435	0.71	0.00			
% College Grad	0.057	0.04	0.11	0.009	0.04	0.81	-0.433	0.54	0.42			
Constant	0.007	0.02	0.69	-0.057	0.02	0.00	-2.025	0.27	0.00			
N	20,258			17,827			25,671					

Note: Two stage least squares regressions with fixed effects for regions and year (not shown); Instrumented: Two-group H Index of segregation; Excluded Instruments: # of Waterways, Population logged.

Regardless of the statistical approach used, segregation appears to have a powerful, depressive effect on public goods provision in cities. The pattern of results in Table 6.5 reflects the OLS regression findings presented in Table 6.2. After accounting for demographic differences, cities with more segregation tend to have smaller budgets, they tend to extract fewer resources from their residents, and spend less on roads, policing, parks, sewers, and support for the poor.

But perhaps lower spending is what residents prefer. After all, many elections have been won on platforms promising austerity and frugality. In the final section of this chapter, I explore what the consequences of low spending might be by analyzing a universally disliked event: sewer overflows.

Segregation and Sewer Overflows

The federal Environmental Protection Agency (EPA) monitors municipal sewer systems for overflow events. According to a 2004 EPA report to Congress, approximately 860 billion gallons of untreated wastewater were released into communities between 2001 and 2003 when sewer systems' capacities were exceeded. Any single overflow might occur for many reasons – excessive wet weather, pipe blockages, equipment failure, or insufficient capacity. However, generally, as Tessin (2009) explains:

> The performance of a sewer system is strongly related to capital fund-raising….Without adequate investment, excessive groundwater can enter sewers through cracked pipes and ingrown tree roots. Aging pipes can break and send sewage to the surface. Growing populations can cause wastewater flow to exceed the system's design capacity….For these reasons, local governments that do not invest enough capital typically experience more sewer overflows and other system failures…(p168).

Some federal and state grants are available for sewer system maintenance, but the vast majority of funding to reduce overflows comes from local sources (EPA 2004). According to

my data, the most segregated cities spend about $200 less per capita each year on their sewer systems. In the aggregate, this translates to an average of about $60,000 less per year spent on sewers (after controlling for all of the other demographic variables included in the regressions above). When city engineers plan, build, extend, and repair sewer systems, they take into account variables like population growth and average precipitation, as well as potential deviations from those estimates.

Analyses of effective or responsive governmental policy typically needs to take into account variation in constituent preferences. For instance, a community that spends very little on protection of open space or on recycling may be accurately representing the views of its residents. Sewer overflows are different. No one wants a river of fecal matter running down their street or flooding their basement. Thus, it seems reasonable to assume that more frequent overflows are, without qualification, worse than fewer overflows. That said, voters and sewer engineers may not agree on the level of resources needed to prevent overflows and therefore, raising funds for capital improvements may be challenging. If it is the case, as I have asserted above, that more segregated cities will have more trouble coming to political consensus about public goods provision, then we ought to expect more segregated cities to witness more sewer overflows – all else equal. In order to determine whether or not this is the case, I utilize data collected by the Environmental Protection Agency in 2004.

In this data collection, the EPA gathered information on overflows from 25 state environmental agencies between 2001 and 2003.[132] In total, the EPA reported about 35,000 different overflow events from several thousand sewer agencies. The EPA data do not include any geographic identifiers other than the name of the sewer agency, and so, I matched these

[132] The data were generously provided to me by Jeff Tessin who had secured the data from an EPA staff member for his PhD dissertation.

names to cities by hand. After dropping cases in which the sewer operator was not a municipal government (e.g. metropolitan water districts or county governments), and cases in which the EPA data provided insufficient detail to identify the municipality, I determined the location of 19,817 overflow events. I aggregated these events to the city level and was able to match these data to segregation measures and Census data for 1,417 cities.

The median number of overflows during this period was 2, while the mode was 1. A few cities with enormously high numbers of overflow events pull the mean to 50. For this reason, I take the natural log of the number of overflow events for each city and standardize it by the city's population. This *Logged Overflows Per 1000 Persons* measure serves as my dependent variable. My main independent variable is the city's *H* Index of racial segregation measured in 2000 if available and 2010 if not. I control for the natural log of the *Total Population* to account for the possibility that cities serving more people are likely to have more advanced engineering for their sewer systems by necessity. I add fixed effects for states for two reasons. The first is that the EPA data collection gathered statistics form state agencies which may have had different reporting standards. The second reason is to account for the different environmental, regulatory, and funding environments cities in different states face. In a second regression, I add controls for other city demographics. I add the share that *Rents* their homes to account for the possibility that homeowners may be more likely to act politically to prevent overflows. I include the share of the population that is *Urban* to capture the difficulties rural areas may face in providing sewer systems to a dispersed population. I include the share of the population that is *Black*, *Asian*, and *Latino* to determine whether or not diversity alone can account for poor performance. I add the city's *Median Household Income* and *Per Capita Subventions* to measure the city's capacity to

raise funds for sewer maintenance and expansion. The results of these OLS regressions with robust standard errors are shown in Table 6.6 (summary statistics are in appendix Table A6.5).

Table 6.6: Correlation Between Segregation and Sewer Overflows

	β	SE	P>|t|	β	SE	P>|t|
Segregation	2.166	0.53	0.00	2.398	0.78	0.00
Population (logged)	-0.347	0.05	0.00	-0.325	0.07	0.00
% Renters				-0.424	0.40	0.29
% Urban				-0.129	0.09	0.16
% Black				-0.524	0.37	0.16
% Asian				3.813	1.01	0.00
% Latino				-0.080	0.28	0.77
Median Income (1000s)				-0.001	0.00	0.66
Subventions Per Capita (1000s)				-0.031	0.01	0.00
Constant	3.678	0.53	0.00	3.554	0.59	0.00
N	1,417			1,417		
R^2	0.199			0.207		

Note: Linear regressions with fixed effects for states, robust standard errors presented.

The data reveal a significant correlation between segregation and sewer overflows. Living in a city with very little segregation, one can expect about 1.5 overflows per year on average. This increases to nearly 2.5 overflows in cities at the 95th percentile of the segregation distribution. Not only do segregated cities see lower spending on public goods, but they also witness worse performance as well.

Conclusion

The evidence presented here indicates that racial segregation plays a significant role in access to public goods. Segregated cities are comprised of homogeneous neighborhoods embedded in larger diverse communities. While African Americans, Latinos, and Asians are today, fairly likely to live as neighbors, whites remain in isolated enclaves. Because local governmental decisions often concern spatial allocation, neighborhoods are important municipal

actors in local politics. In more segregated places, neighborhood interests become overlaid with racial division. Segregated cities are more racially polarized in elections and may be less likely to generate policy consensus. The result is that cities with more segregation have smaller public goods budgets. Segregated cities raise fewer dollars from their residents and spend less money on roads, law enforcement, parks, sewers, welfare, housing, and community development. This low spending may have significant consequences. For example, segregated cities also see more sewer overflows.

Patterns of residential location reveal that white residents are more likely than people of color to live in cities with low levels of segregation. In my dataset, nearly 74% of nonwhite residents live in cities in the top quintile of the segregation distribution, compared to only 48% of whites. What this means is that compared to whites, nonwhites are much more likely to live in communities that struggle to generate adequate public goods for their residents. Not only are whites segregated from racial and ethnic minorities within cities, but they are also segregated from people of color across city lines. This fact means that access to public goods is segregated along racial lines as well. As the nation has become more diverse, it has also become more unequal. Segregation and public goods play important roles in linking these phenomena.

Chapter 7: The Local Roots of Modern Conservatism

Between the late 1940s and mid-1960s, fights over racial integration pervaded the politics of America's cities. Throughout the United States, residents battled over the integration of public schools, public transportation, pools, parks, golf courses, and of course – neighborhoods. In detailed case studies, historians have shown that white resistance to desegregation in urban centers across the country, gave rise to a new rhetoric that emphasized the protection of private property and homeowners' rights (Kruse 2005, Lassiter 2006, Self 2003, Sugrue 1996). These historical studies argue that the rise of conservatism and Republican allegiance associated with suburban America today was actually rooted in the conflictual racial politics of central cities. In this chapter, I provide evidence that these patterns were widespread. I show that battles over the control of public space and public goods in postwar urban America contributed to the transformation of the demographic landscape and affected public opinion. People who would come to live in segregated neighborhoods, either by choice, compulsion, or happenstance, developed political attitudes and loyalties that differed significantly from similarly situated residents in more integrated places.

First, I show that federal school desegregation orders generated increases in the number of segregated neighborhoods in metropolitan areas. In this analysis, I take advantage of the randomness desegregation order timing to substantiate the link. Then, I provide evidence that the relative whiteness of a neighborhood in 1970 is a powerful predictor of political attitudes and loyalties today. People who live in places that were whiter than their metropolitan area in 1970 were more likely to vote for the Republican presidential candidate in 2008 and are more conservative than their individual attributes (e.g. race, gender, marital status, age, education, income, presence of children) would otherwise predict. Conversely, those who live in places that

were more diverse in 1970 are more liberal today. However, even with a set of individual-level controls, it is difficult to convincingly estimate the effect of neighborhoods on public opinion. Some unmeasured characteristic might cause certain neighborhoods to be more or less diverse than the larger metropolitan area in 1970, and for individuals who live there to be more or less liberal. Given existing evidence that racial attitudes became a more important predictor of vote choice and public opinion during this same period (Carmines and Stimson 1989), it is important ensure that these relationships are being driven by the attributes of neighborhoods and not omitted individual-level variables. To do this, I instrument for the relative whiteness of neighborhoods using two geographic features: land elevation (controlling for waterfront areas) and distance from the nearest big city.

The consequences of segregation on individuals' life chances are well known; and as Thomas Sugrue (2015) writes, "the effects…are devastating."[133] Segregation increases inequality on many different socio-economic dimensions (Cutler and Glaeser 1997, Ananat 2011). The results presented here indicate that segregation also has powerful political consequences - increasing divisions in both public opinion and voting behavior.

Entanglements of Ideology and Integration

At the onset of the Second World War, the United States was already a very segregated nation. All large cities had clearly defined neighborhoods inhabited by people of color and others inhabited by whites – a pattern generated by both private choices and public policies (Massey and Denton 1988). [134] As a result of the economic collapse during the Great Depression

133 https://www.washingtonpost.com/opinions/its-not-dixies-fault/2015/07/17/7bf77a2e-2bd6-11e5-bd33-395c05608059_story.html

134 However, on the whole, the United States, both rural and urban, was still overwhelmingly white in 1940. About 10% of the population was black, about 1.7% of the population could be considered Hispanic/Latino, and about

and then material scarcity during the war, the nation faced a severe housing shortage during the 1940s. When increasing numbers of blacks moved from rural areas into cities and from the South to the North and West, the boundaries of existing black neighborhoods were pushed to their limits. In the Southwest, the Latino population also swelled with wartime employment.[135] These pressures resulted in explosive social and policy conflicts along racial lines. Because city governments had the power to zone, to permit development and locate nuisances, and thus to determine the value of property, these fights were central to city politics. As Self (2003) argues, "the effects of property [valuation] are far-reaching…They structure all kinds of interactions - from where one can buy a home to where politics is organized, from how police interact with neighborhoods to where children go to school. The struggle for the postwar city was over no less than the power to control and organize space…" (p18).

In response to postwar demographic changes, white homeowners sought to protect their neighborhoods (which they considered to be the reward for their hard work and frugality) from disruption and disorder. In the minds of many, pursuit of these goals required racial exclusivity. Sugrue (1996) reports that in Detroit, as elsewhere, "a majority of whites looked to increased segregation as the solution to [the] 'colored problem'" (p215). Whites, particularly those who owned their homes, believed that they had a right to certain neighborhoods and the public benefits (e.g. schools, safety) associated with those spaces. They understood minority demands for integration and court ordered desegregation plans as undermining this entitlement (Kruse 2005, p126). Whites justified exclusion with fiscal arguments; claiming that, "since Negroes are

0.1% Asian. http://www.latinamericanstudies.org/immigration/Hispanics-US-1850-1990.pdf; https://www.census.gov/population/www/documentation/twps0076/twps0076.pdf

[135] http://www-bcf.usc.edu/~philipje/Segregation/Haynes_Reports/Contours_PRR_2001-04e.pdf. Hundreds of thousands of Mexican descendants were deported during the Great Depression, so the overall Latino share of the population changed little.

so poor and pay virtually no taxes, they are actually not entitled to get more public services than the whites care to give them…" (Myrdal 1944, p336). When blacks *did* receive benefits, it was believed that whites unfairly bore the financial burden of their support. To illustrate this point, Kruse (2005) quotes a segregationist poem that made rounds in Atlanta in 1957:

> Po' white folks must labor, 'tween sun and sun,
> To pay welfare taxes whilst we has de fun,
> We doan pay no taxes, we doan make no goods,
> We just raise little niggers, way back in the woods.... (p127).

Above all else, whites feared that integration would jeopardize their single largest investment – the value of their home (Helper 1969), as well as the quality of their neighborhood (Kruse 2005). The tight coupling between property values, public goods, and racial exclusivity was inexorably tied to the racism embedded in the real estate market (Hayward 2013) and the poor public goods that cities had provided to neighborhoods of color in decades past (Myrdal 1944, Torres-Rouff 2013). Kruse (2005) explains that, "by the time white homeowners confronted racial transition at their neighborhood's borders, the American real-estate industry had completely embraced the idea that such racial transition would, without doubt, lead to a devastating decline in property values" (p60). Public policies like redlining and expulsive zoning[136] and private actions like racial steering and white flight would make this relationship true over the long run.[137]

[136] Expulsive zoning is the practice of siting industrial, semi-industrial, or other nuisances in neighborhoods of color in order to both preserve white neighborhoods and induce black movement into particular parts of the city.
[137] In the short run, blacks paid much higher prices than whites for comparable housing (Cutler and Glaser 1997). This fact was what made it so lucrative for individual whites to abandon neighborhood protection and move to the suburbs. In Atlanta, Kruse (2005) analyzes the property values in a neighborhood that transitioned from white to black between 1950 and 1960, and finds that the property values rose 27 percent over this decade.

Although many whites agreed on the desirability of residential segregation,[138] they were stymied by various hurdles. The Supreme Court had ruled racial zoning (the designation of certain neighborhoods as being inhabitable only by whites) unconstitutional in 1917, so a perfectly direct policy approach to residential segregation was not an option.[139] Instead, the preservation of white communities required collective action to prevent individual homeowners from selling or leasing to minority residents. As minority populations expanded and white homeownership rates skyrocketed, hundreds of white homeowners' organizations arose in the 1940s, 50s, and 60s (Sugrue 1996, Kruse 2005).[140] Such organizations were often created by real estate developers to protect the value of their investment. This was a charge taken seriously by property owners. These (typically all white) "civic associations, productive associations, improvement associations, and homeowners' associations" (Sugrue 1996, p211) fought the building of public housing in their neighborhoods, sought representation on planning boards, and battled open housing laws (Self 2003).[141] Importantly, they relied on racial restrictions in housing deeds (and racism in the real estate market) to maintain neighborhood exclusivity. But the Supreme Court ruled restrictive covenants unenforceable in 1948 (*Shelley v. Kraemer*), and an open housing movement swept the nation. Then, in the 1950s, other tools of segregation came under fire as the court struck down separate-but-equal accommodations in a series of cases.[142]

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[138] In 1964 only 27% of white Americans supported general integration (Schuman et al 1985).
[139] Many white neighborhoods also utilized violence to defend their borders (Meyer 2000, Hirsch 1983). Although tolerated (even encouraged) by the police and political establishment of some cities, murders and arson were technically illegal as well.
[140] In some cases, the link between segregationists and homeowners' groups was direct. For example, the head of Atlanta's West End Cooperative Corporation had gotten his start in community organizing as the head of Klavern No 297's Housing Kommittee (Kruse 2005 p54).
[141] They also served as social organizations welcoming new neighbors and organizing block parties (Sugrue 1996).
[142] e.g. *Muir v. Louisville Park* 1953, *Brown v. Board of Education* 1954 & 1955, *Holmes v. Atlanta* 1955, *Dawson v. Baltimore* 1955, *Rice v. Sioux City Memorial Park Cemetery* 1955, *Browder v. Gayle* 1956, *Burton v. Wilmington* 1961, *Johnson v. Virginia* 1963, *Simkins v. Cone Memorial Hospital* 1963, *Watson v. City of Memphis* 1963.

By this time, nearly all cities utilized zoning in some fashion and many invoked the power of eminent domain to shape development through, for example, the permitting of multi-family housing, the razing of slums, and the placement of highways, public housing, and industry. In the past, white homeowners had successfully used these tools to configure residential demography (Nightingale 2006) – but they became even more important in the face of new court decisions and the rising Civil Rights Movement.[143] At the same time, racial violence continued to erupt. However, local elites were committed to maintaining peace in their cities (Ogorzalek 2017). So, in order to convince city governments to defend their turf, white neighborhoods needed to change their approach.

In city after city, white middle class, homeowners turned away from claims based on racial exclusivity and began to press their demands in terms of rights; a tactic Sugrue (1996) terms "defensive localism" (p210). White residents fought for the, "'right' to select their neighbors…the 'right' to do as they pleased with their private property…and the 'right' to remain free from what they saw as dangerous encroachments by the federal government," (Kruse 2005, p9). Local governments responded with neighborhood protection by pursuing "racial stability through spatial apartheid" (Lassiter 2006, p52). In the South, these arguments were the moderate path – a response to violent white supremacy on the right and integrationists on the left (Lassiter 2006, Kruse 2005). The fact that rights-based language gained ground in all regions of the United States meant that it offered a powerful basis for the rise of a national movement.

[143] Throughout this period, neighborhood organizations also sought to maintain the color line using private mechanisms as well. For instance, some organizations raised funds to repurchase homes sold to black families in order to sell them back to whites. They also pressured real estate agencies and lenders to refuse to sell to black buyers. Additionally, they set fire to homes on the black market and newly purchased homes by black owners (Kruse 2005, Sugrue 1996). The problem with such tactics is that they were always susceptible to a sort of prisoner's dilemma. It was incredibly lucrative for a single white homeowner to sell her home to a black family and this idea made individual white owners skittish about neighborhood transition. Neighborhood organizations constantly urged owners to think of the common good rather than their bottom line, but frequently failed.

The discourse had several facets. Subscribers claimed support for racial integration in theory (so as to distinguish themselves from the ugliness of Jim Crow), but angrily opposed government intervention in racial uplift or equalization (Lassiter 2006, p137). In fact, integration was typically viewed in zero-sum terms – gains for blacks equated to losses for whites. Government attempts to produce equal outcomes were understood to be an elevation of minority rights above those of the majority (Sugrue 1996, p227), a form of "reverse discrimination" (Lassiter 2006, p123). Policy solutions to redress inequality were cast as the work of an insidious, "'liberal elite' made up of judges, intellectuals, and government bureaucrats" (Hall 2005, p5).

Further drawing on racialized beliefs about the distribution of tax burdens, neighborhood defenders argued that they should not have to pay for public benefits or welfare for those who did not contribute to the public pool. So when people of color demanded, and then the court ordered, desegregation of public spaces and residential communities, these views culminated in all out tax-revolts among white residents. In cities like Atlanta, whites urged the city government to eviscerate the public budget, eliminate bus lines, as well as close pools and public parks (Kruse 2005). Whites voted down bonds for civic improvements, abandoned public schools, and railed against an activist government. In the end, many of these residents would leave the city altogether – packing up their belongings and their newly appropriated ideology and moving to the suburbs (Nall 2015, Boustan 2010).

Yet, suburban growth largely happened for market reasons that were unrelated (or at least, only tangentially related) to racial conflict in cities (Jackson 1985). As Chapter 1 revealed, by 1970, a plurality of the population lived in suburbs and more than 60% of Americans owned their homes. As the pace of suburbanization and homeownership picked up, arguments

surrounding neighborhood defense lost explicit racial designations of who contributed and who did not and who had a right to high property values and good services and who did not. As Self (2003) explains, the move away from making overt racial claims was, "intended to inoculate segregation and white privilege against charges of racism" (p268). This new language offered a "color-blind" approach to the maintenance of neighborhood boundaries. This rhetoric perpetuated the myth that residential segregation was a matter of economics and individual choice. White homeowners came to see segregation as the consequence of "meritocratic individualism" – not fostered by public policy or law (Lassiter 2006, p1). Those who lived in segregated minority neighborhoods could thus be blamed for their condition, making them undeserving of social assistance.

Maintaining exclusively white neighborhoods in the central city was possible with the help of cooperative city governments. But it was much easier in the suburbs, where a combination of public policies and private actions made homeownership only available to white residents (Jackson 1985, Hayward 2013). By 1970, neighborhoods (both within central cities and outside of them) that had maintained their whiteness despite the massive demographic shifts over the preceding 30 years had developed a distinctive, conservative approach to politics throughout the nation. Homeowners in these places expected low taxes, they rationalized racial segregation and inequality as the product of meritocracy, and they conflated white exclusivity with high property values (Self 2003, Lassiter 2006). They couched their demands in terms of protection of individual property rights. In so doing, they drew on a long tradition of American conservative principles emphasizing economic individualism, limited government, and equality of opportunity, but not outcomes (Feldman 1988, McClosky and Zaller 1984, Kinder 1998).

Nearly forty years later, these neighborhoods continued to foster distinctive politics. Whether or not new arrivals to defended neighborhoods had been involved in the earlier battles, they came to, "accept the politics born out of white flight all the same. They embraced a new middle class rhetoric of rights and responsibilities" (Kruse 2005, p245). The Republican Party came to embrace the neighborhood defenders. Starting in the 1960s and throughout the 1970s, Republicans positioned themselves as the party that would help whites to resist social change and impose order in their environments (Hetherington and Weiler 2009, Carmines and Stimson 1989). These ideals held sway in defended neighborhoods and residents dutifully sorted themselves into the Republican Party.

The arguments appropriated in support of neighborhood defense in the 1950s and 60s are still visible in politics today. In the 2012 presidential election, Republican nominee Mitt Romney proclaimed:

> There are 47 percent of the people who will vote for [the Democratic incumbent] no matter what…who are dependent upon government, who believe that they are victims, who believe the government has a responsibility to care for them, who believe that they are entitled to health care, to food, to housing, to you-name-it. That that's an entitlement. And the government should give it to them….These are people who pay no income tax…My job is not to worry about those people. I'll never convince them they should take personal responsibility and care for their lives (Corn 2013).[144]

Like the homeowners' organizations of the mid-century, Romney's statement invoked a class (not race)-centered view of deservingness. Forty-seven percent of the American public, Romney implies, "doan pay no taxes," and rely on government benefits for subsistence. Romney's claim

[144] More boldly, 2016 Republican nominee Donald Trump's first wife explained, "I have nothing against Mexicans, but they [come] here — like this 19-year-old, she's pregnant, she crossed over a wall ….She gives the birth in American hospital, which is for free. The child becomes American automatically. She brings the whole family, she doesn't pay the taxes, she doesn't have a job, she gets the housing, she gets the food stamps. Who's paying? You and me." http://nypost.com/2016/04/03/ivana-trump-opens-up-about-how-she-advises-donald-his-hands/

that these non-contributors do not take personal responsibility for their lives recalls the meritocratic arguments white homeowners made in the past about their success and their neighborhoods. It is unsurprising then, that defended neighborhoods have offered disproportionate support to Republican candidates and conservative policies in recent years.

The Effect of Context

To say that neighborhoods condition political views and actions is not novel. A great deal of research investigates contextual effects on public opinion and political behavior. A significant portion of this literature focuses (as I do here) on the community's racial composition.[145] Some scholars find that diversity produces tolerance (e.g. racial contact theory; Allport 1954, Oliver 2010, Sigelman et al. 1996). Others find the reverse - that large minority populations are related to racial intolerance and lack of support for spending on race-focused or race-coded policies (e.g. racial threat theory; Key 1949, Gay 2006, Huckfeldt 1986, Orey 2001, Taylor 1998, Bobo and Hutchings 1996, Blalock 1967, Alesina and Glaeser 2004, Tolbert and Hero 1996, Plotnick and Winters 1985, Enos 2016, Baybeck 2006). Scholars also find a negative relationship between diversity and support for taxation, spending, and public goods provision more generally (Alesina et al. 1999; Glaser 2002; Alesina and Spolaore 1997; Easterly and Levine 1997; Poterba 1997; Habyarimana et al. 2007, 2009; Putnam 2007; Cutler et al. 1993; Goldin and Katz 1999, Hopkins 2009, Vigdor 2004). My argument draws on both of these frames to argue that rights-oriented conservatism was fueled in an environment of racial threat (integration in the 1940s, 50s, and 60s), but became entrenched in an environment of racial isolation (whiteness of the neighborhood in the 1970s). Today, white conservatism at the

[145] Other work on context analyzes social networks (Eulau and Rothenberg 1986, Zuckerman 2005), partisan contexts (Ceaser 2013 and DiSalvo 2006) and economic contexts (Gay 2006, Books and Prysby 1999, Oliver 1999, Oliver and Mendelberg 2000)

individual level is associated with homogeneity *not* diversity in neighborhoods. The whiteness of a neighborhood could produce individual-level conservatism through two different mechanisms: the nonrandom migration of individuals into or out of whiter neighborhoods (i.e. sorting/selection), or by directly affecting the ideology of residents (i.e. treatment). The sorting mechanism is supported by research demonstrating the existence of white flight (Boustan 2010, Nall 2015) and work that offers evidence of residential choice based on differing preferences for integration and other community features (Mummolo and Nall 2016, Cho, Gimpel and Hui 2013, Bishop and Cushing 2008, Card, Mas, and Rothstein 2008, Charles 2006). A treatment effect is consistent with work showing that particular types of places generate distinctive preferences as a result of features like population density or community size (Rodden 2011, Gainsborough 2001, Ogorzalek 2017, Oliver 2001).

Treatment is also consistent with work revealing differences across places that magnify the individual attributes of inhabitants – such as when minority neighborhoods lack elite networks (Wilson 1987, Widestrom 2015). A treatment effect is further predicted by scholarship that finds that neighborhood homogeneity breeds racial hostility and intolerance due to a lack of exposure to or contact with neighbors of different backgrounds (Oliver and Mendelberg 2000, Oliver and Wong 2003). Finally, a treatment effect is indicated by scholarship demonstrating what Acharya, Blackwell, and Sen (2016) refer to as the "historical persistence of political attitudes" (p2). Patterns of race relations developed during early periods of American history generated opinions and behaviors among whites in particular places that were transmitted over time and remain detectable in modern politics (see also Hersh and Nall 2016). My argument is similar: battles over integration that occurred mid-century imbued defended neighborhoods with distinctive political attitudes that are communicated through processes like neighborhood social

interaction (Huckfeldt and Sprague 1995) and/or "low-intensity cues" - the casual observation of ones' neighbors (Cho and Rudolph 2008).

Very likely, both selection and treatment processes are at work here. Some residents of defended white neighborhoods brought their conservatism with them; others adopted it after arriving. Today, defended neighborhoods are also likely to continue to attract movers with conservative preferences. Without detailed panel survey data, I cannot discern which is the more powerful factor. What I am able to demonstrate is that neighborhood traits from the 1970s predict conservatism at aggregate and individual levels above and beyond the mobility of the population and the demographic makeup of the neighborhood today.

Conservatism and Race

Just as it is not novel to propose that neighborhoods affect political behavior, it is also not novel to propose that modern conservatism and Republican voting are rooted in racial conflict (see Hutchings and Valentino 2004 for a thorough review). Indeed, it is uncontroversial to state that the Civil Rights movement was a catalyst for partisan realignment, as Southern Democrats abandoned the party championing the rights of Black Americans (Frymer 1999, Carmine and Stimson 1989, Miller and Shanks 1996).

Since the 1970s, scholars have argued that white public opinion shifted mid-century, from a willingness to endorse Jim Crow style race prejudice/biological racism to subtler/symbolic expressions of racial resentment (see for example, Sears and Kinder 1971, Kinder and Sears 1981, McConahay 1982, Sears 1988, Kinder and Sanders 1996, Sears et al. 1997, Bobo 1983, Bobo, Kluegel, and Smith 1997, Schuman et al. 1997).

Additionally, a sophisticated literature on public opinion and political behavior reveals that racial attitudes are strongly predictive of views toward redistributive spending (Bobo and Kluegel 1997, Sears 1988, Kinder and Sanders 1996, Rabinowitz et al. 2009, Federico 2005, Gilens 1999, Quadagno 1994, Luttmer 2001) and government policies that have become racially coded (Winter 2006, Valentino, Hutchings, and White 2002, Mendelberg 2001, Hurwitz and Peffley 1997). If an individual holds negative stereotypes of racial minorities, he or she is likely to oppose expenditures on functions like welfare, and even all government spending in some settings (Sears and Citrin 1982).

What I add to these debates is not a link between racial politics, public opinion, ideology, and party identification, but a new perspective on location. The marriage between rights-based conservatism and white perspectives on race was amplified in the crucible of *city* politics throughout the postwar period not just at the state and national levels. And neighborhood defense appears to have played a causal role in the development of a host of conservative political opinions that appear to be "nonracial" (Hutchings and Valentino 2004, p6).

Empirical Evidence

I've argued that local battles over integration of public spaces in the postwar period led some whites to pursue exclusively white neighborhoods. To generate government support for segregation, neighborhood defenders turned to a set of conservative arguments that highlighted their meritocratic success. Because the Republican Party protected defenders' rights to choose their neighbors, it won their allegiance. If my argument is correct, we should find 1) that integration pressures are related to a higher incidence of exclusively white neighborhoods and 2) that residents of homogeneous white neighborhoods are more conservative and more Republican.

Testing these claims requires that I measure the presence of exclusively white neighborhoods (as the dependent variable in the first hypothesis, and as the independent variable in the second). To do this, I constructed a dataset using a proprietary product developed by GeoLytics called the Neighborhood Change Database (NCDB). The NCDB matches and normalizes census tracts between 1970 and 2000, allowing for a direct comparison of neighborhoods over time. To this, I add census tract data from the 2011 American Community Survey, matched to 2000 boundaries. I refer to neighborhoods that have a greater share of white residents than the metropolitan area as a whole as white defended neighborhoods; conversely, neighborhoods that have a greater share of residents of color than the metro area are called minority dominated neighborhoods. I use this relative conception because many residents are constrained to a particular metropolitan area by preferences or needs (Mummolo and Nall 2016), but the choice of neighborhood within that metro area may be more flexible. I capture this dynamic by measuring the demographic makeup of neighborhoods *compared to* the demographic makeup of their larger metropolitan area. This variable is the *Tract-Metro Difference in Percent White Residents.*[146] Neighborhoods that are whiter than the metro area as a whole have a positive value and those that have more people of color take on a negative value. In 1970, the average neighborhood was only very slightly whiter than the metro area (Mean= 0.018), but the distribution has a long left tail, indicating many neighborhoods that were overwhelmingly populated by people of color; by 2011, the distribution was more normally distributed, with a mean just slightly less than zero. This difference in distributions reflects the diversification of the nation and the well-documented finding that neighborhood level segregation between whites

[146] The census did not tabulate whites separately from Hispanics in 1970, but did in 1980, 1990, 2000, and 2011. Where possible I use non-Hispanic whites

and people of color has declined substantially since the 1970s (Vigdor and Glaeser 2012, Frey 2014).

In order to determine the effect that pressures for integration had on neighborhood demographics, I take advantage of a dataset compiled by Nathaniel Baum-Snow and Byron Lutz (2011) that records the timing of federal court orders for desegregation of public schools in central cities.[147] Although *Brown v Board of Education of Topeka* determined the unconstitutionality of segregated schools, a specific court order was nearly always required for large, central city districts to pursue desegregation plans. The data include court orders implemented between 1960 and 1990 for 92 central school districts in metropolitan statistical areas. Of these 92 orders, 48 are in the South, 9 are in the Northeast, 20 are in the Midwest, and 15 are in the West.

My examination does not include metropolitan areas that never faced a desegregation order. The factors that led some metro areas to receive court-ordered school desegregation plans and others not to receive such plans are most certainly not random, and are likely related to the outcome of interest here (the presence of white defended and minority dominated neighborhoods). Inclusion of the districts with no court order would thus be likely to violate the identifying assumption on the desegregation parameter. However, for those central cities in metropolitan areas that *did* receive an order, the timing of that order is plausibly exogenous to unobserved time-varying factors *within* metropolitan areas that might affect segregation due to the vagaries of the judicial process. The precise date at which court orders took effect was

[147] The data are described completely in the statistical appendix to Baum-Snow and Lutz (2011)'s paper. The appendix is available at: https://www.aeaweb.org/aer/data/dec2011/20080918_app.pdf

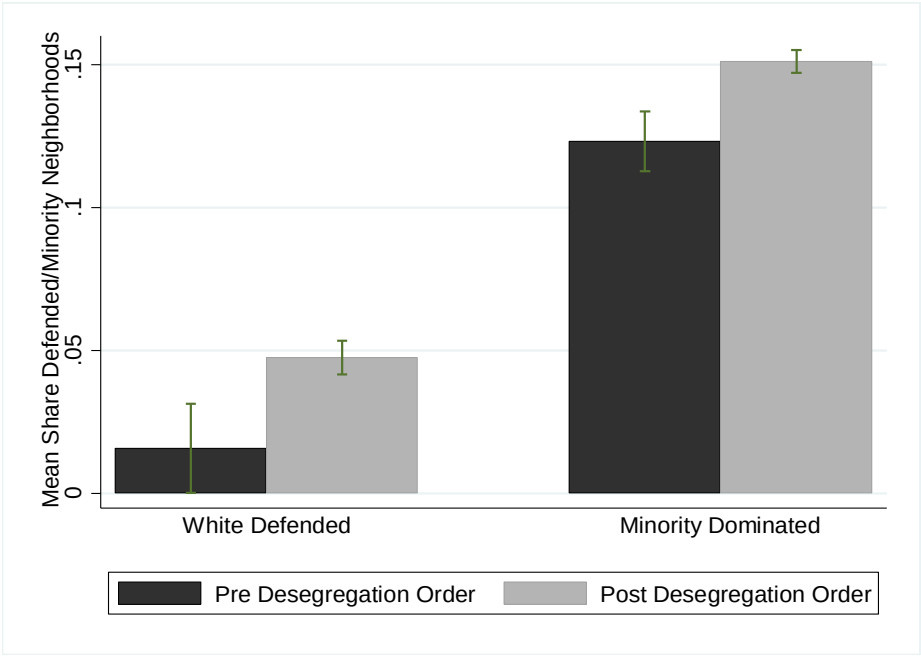
related to differences in the length of the appeals process for otherwise similar metropolitan areas (Baum-Snow and Lutz 2011).

Including Metropolitan Statistical Area (MSA) fixed effects ensures that the analysis compares the presence of defended/minority neighborhoods before and after the implementation of the court order in each metro area, while accounting for variation across MSAs. For each metropolitan area, in each of four census years (1970, 1980, 1990, and 2000), I calculated the mean *Tract-Metro Difference in Percent White* and the standard deviation of this measure. I then generated a count of census tracts that were either greater than or less than one standard deviation away from the mean racial difference for each census year in each MSA. These counts form the numerator for the share of all neighborhoods that are *White Defended* or *Minority Dominated*. These shares serve as dependent variables in my analyses. The key independent variable in my analysis, *Desegregation Order*, is a dummy indicator coded from the Baum-Snow and Lutz (2011) data noting whether or not a desegregation order was in place in the MSA's central city for a given census year. The analysis compares the number of defended/minority neighborhoods before and after the implementation of desegregation by the federal government in each MSA.[148] As controls, I add the log of the *Total Population* in the MSA, the share of MSA households *Renting* their homes, the *Wealthy* share of households (households with incomes above the 90th percentile), and the population *Density* of the MSA. While it is unlikely that these factors are related to desegregation order timing, directly, it is possible that they reflect an underlying time trend that influenced implementation as well as the propensity for

[148] Of the 92 metro areas in the dataset, 64 had orders implemented between 1970 and 1990. Because tract-level data was not available for most areas in 1960, I am unable to estimate change for 28 metro areas. These MSAs are still included in the regressions – just with no change on the desegregation order variable.

segregation. Figure 7.1 displays the marginal effects of desegregation orders, holding the control variables at their mean values.

Figure 7.1: Federal Desegregation Orders Increase Residential Segregation



The figure shows that desegregation orders significantly increased the share of neighborhoods that were both white defended and minority dominated. On average, desegregation orders generated about 30 new homogeneous neighborhoods in metropolitan areas. Homogeneity was achieved when **whites** moved within cities to new neighborhoods and to the suburbs.[149] Approximately two-thirds of the exclusive white neighborhoods in this dataset

[149] Baum-Snow and Lutz (2011) provide evidence that Black families responded to desegregation orders by moving into newly integrated central school districts suggesting that changes in homogeneity of neighborhoods would have been driven by white not black movers.

are located in suburban places and about three-fourths of the homogeneous neighborhoods of color are located in central cities.

Did these homogeneous neighborhoods produce identifiably different politics? In short, yes. To provide evidence of this claim, I measure the homogeneity of neighborhoods continuously for a single year - 1970. I use 1970 because this year marked the height of residential segregation in America and the end of the post-war period of massive demographic change (Cutler, Glaeser, and Vigdor 1999). First, I analyze the effect of neighborhood homogeneity on the aggregate 2008 presidential vote. Then, I turn to individual-level data. I find that homogeneity in 1970 predicts conservatism today.

My first dependent variable is the 2008 *Democratic Share* of the two-party presidential vote aggregated to the census tract level for the 49 states that collect vote data by precinct.[150] Precinct-level vote returns are available from the Harvard Elections Database Archive.[151] Using ArcGIS, I combined the precinct vote data with 2000 census tract boundaries available from the National Historic Geographic Information System archive.[152] I aggregated precinct-level votes to the census tract level.

My independent variable is the *Tract-Metro Difference in Percent White, 1970*. This measure captures the difference between the tract-level share of residents who were white and the metro area-level share of residents who were white in 1970. I control for the 2000 tract-level *Percent White*, the share of the tract that *Rents* their home, and the share of the tract's households

150 Oregon conducts all elections by mail, so geographically allocated votes are not available.
151 A combined, projected polygon shapefile was very generously provided to me by Clayton Nall.
152 Because precinct boundaries sometimes cross-tract boundaries, I calculated the land-area share of each precinct falling within each census tract. I used this geographic share as a weight on the total votes for the Democratic and Republican candidates before aggregating precinct vote totals to the tract level.

that are *Wealthy* (incomes above the 90th percentile). These variables account for the possibility that whiter tracts in 1970 are simply populated by more whites and homeowners today, and so, are more conservative only as a result of their current demographics. I also add the *Density* of the census tract (total population divided by total area) to account for Rodden's (2011) argument that the source of modern liberalism is housing density. To investigate the role of selection, I add a measure of the share of the tract's residents who lived in the same house in 1995. In a third analysis, I add fixed effects for region. In all analyses, I use ordinary least squares regression and cluster errors by MSA. Table 7.1 presents the results of these regressions. Summary statistics are shown in appendix Table A7.1.

Table 7.1: Effect of 1970 Relative Whiteness on 2008 Democratic Vote Share

	Column 1			Column 2			Column 3		
	B	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	-0.422	0.016	0.000	-0.112	0.023	0.000	-0.080	0.019	0.000
% White 2000				-0.340	0.026	0.000	-0.408	0.021	0.000
% Renters 2000				0.244	0.024	0.000	0.184	0.025	0.000
% Wealthy 2000				0.116	0.036	0.001	0.121	0.040	0.003
% Same House 1995				0.183	0.044	0.000	0.043	0.042	0.306
Density				1.356	1.164	0.245	-0.143	0.725	0.843
Midwest							0.020	0.013	0.115
South							-0.108	0.018	0.000
West							-0.073	0.020	0.000
Constant	0.631	0.013	0.000	0.628	0.044	0.000	0.816	0.040	0.000
R^2	0.207			0.584			0.643		
N	44,958			44,958			44,958		

Note: OLS regression, robust standard errors clustered by MSA presented.

A neighborhood of color in 1970 (*tract-metro difference* = -0.5), delivered about 84% of its votes to Barack Obama in 2008. A neighborhood that was white defended in 1970 (*tract-metro difference* = 0.5) offered Obama only 42% of its votes in 2008.[153] Obviously,

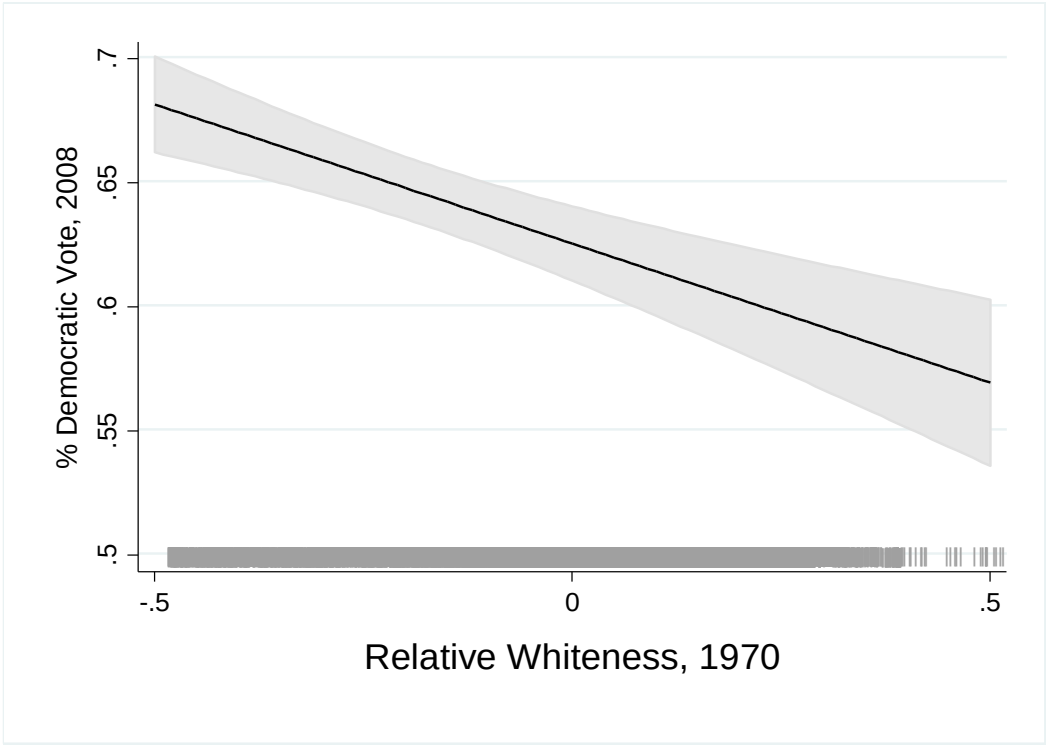
[153] Estimates generated following the regression presented in Column 1, using the margins command in Stata 14.

demographic patterns are persistent – one explanation for this outcome is that these neighborhoods that were white defended and minority dominated in 1970 are still populated with whites and people of color today. But as Column 2 shows, even accounting for contemporary demographics, neighborhoods that were relatively whiter in 1970 were about 11 percentage points less likely to support Obama relative to McCain. The difference between the least white and most white neighborhoods in 1970 is 22 percentage points – even controlling for whiteness in 2000.

Contrary to a pure selection story, census tracts with more stable populations were more (not less) likely to support Obama and there is no interaction effect between stability of the population in 1995 and the whiteness of the neighborhood in 1970. That is, if selection were entirely driving these results, we would expect that tracts that were both white in 1970 and had a large share of movers would be most likely to support the Republican candidate. This is not what we see. Holding all other variables at their mean values, Figure 7.2 presents the results from Column 2 graphically for the densest portion of the distribution on the independent variable.[154]

[154] This portion of the distribution reflects the concepts of white defended and minority dominated neighborhoods. The mean value of the 1970 tract-metro difference in percent white for minority dominated neighborhoods was -0.5 and 0.25 for defended neighborhoods.

Figure 7.2: Effect of 1970 Neighborhood Characteristics on 2008 Presidential Election Votes, Controlling for Demographics in 2000



The third column of Table 7.1 reveals that the relationship holds even when accounting for differences in mean levels of Democratic support across regions. Despite the robustness of the effect of 1970 demographics on 2008 presidential votes, it is possible that some set of uncontrolled factors affect the relative whiteness of neighborhoods in 1970 and Republican support in 2008. In an effort to determine a causal neighborhood effect, I instrument for relative whiteness in 1970 with topographical features measured at the census tract level - relative elevation of the census tract (accounting for waterfront neighborhoods) and the tract's distance from the nearest large city.

Starting perhaps with Burgess's concentric zone model of urban social structure (1925), scholars have noted that metropolitan areas often develop such that the most desirable residential neighborhoods are those that are as far as possible from the central business district, but still within commutable distance. From early on, distance from the center denoted privilege; and the historical record indicates that movement to outer lying areas was more available to whites than people of color for many decades (Jackson 1985).[155]

To measure distance from the nearest central city, I used 2010 place boundaries available from the National Historic Geographic Information System. Using data from the 2011 American Community Survey, I determined the largest population center in each metropolitan area. I converted these central cities and 2000 census tracts to centroids in ArcGIS. I measured the Euclidean distance between the closest central city and each census tract (using a near table with only one match). To generate a normal distribution, I took the natural log of this distance. The resulting measure, *Distance to Center City* (logged), is my instrumental variable.

To be useful, an instrumental variable must predict the primary independent variable, but not directly affect the dependent variable. As explained above, there is good reason to believe that a neighborhood's distance from the nearest central city positively affects the share of residents who are white in that community. There is no reason to believe that neighborhoods that are far from the city center will house Republican supporters *aside* from their demographic characteristics. However, race is not the only relevant demographic trait. Living outside of the city center also requires residents to be able to afford housing and commuting costs and

[155] That said, at no point in American history has it been the case that black central cities have been ringed by heavily populated white suburbs. This is because when suburbs WERE all white (in the 1920s), they were not heavily populated and central cities were majority white as well. By the time some central cities became majority minority, suburbs had also become more integrated. This fact is further evidence that the correct measure of residential racial context is the racial makeup of the neighborhood as compared to the metropolitan area as a whole.

obviously, race is correlated with socio-economic status. I account for this by adding the share of households in the tract that *Rents* their homes, and the share of households that are *Wealthy* as of 1970 in the first stage of the instrumental analysis.

As in the regressions presented in Table 7.1, my instrumental analysis controls for the share of the population that is white in 2000, the share of the tract that lived in the same house in 1995, and the tract's population density. My dependent variable is again the tract-level aggregate measure of the two-party *Democratic Vote Share* in 2008. I use a two stage least squares regression, with errors clustered by MSA. Table 7.2 presents the results of this estimation.

Table 7.2: Effect of 1970 Relative Whiteness on 2008 Democratic Vote Share, Instrumental Variable Analysis			
	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	-0.226	0.091	0.013
% White 2000	-0.341	0.042	0.000
% Same House 1995	-0.051	0.027	0.062
Density	5.627	1.862	0.003
Constant	0.856	0.031	0.000
FIRST STAGE			
% White 2000	0.290	0.021	0.000
% Same House 1995	-0.272	0.032	0.000
Density	5.548	0.960	0.000
Distance to City Center (logged)	0.015	0.004	0.000
% Renters 1970	-0.141	0.040	0.000
% Wealthy 1970	0.248	0.033	0.000
Constant	-0.195	0.048	0.000
R^2 (second stage)	0.544		
N	44,970		

Note: Two Stage Least Squares Regression, robust standard errors clustered by MSA presented F Test of Excluded Instruments = 50.55

The results of the instrumental variable analysis offer strong additional support for my argument that the defended/minority status of a neighborhood in 1970 continues to exert a powerful, independent, causal effect on partisanship in modern elections. The political identity of neighborhoods appears persistent. In the next section, I provide individual-level evidence of the conservatism of defended neighborhoods.

Individual Level Conservatism

Obtaining individual-level survey data that is representative of city populations is notoriously difficult (Tausanovitch and Warshaw 2014). The costs of sampling across many localities, in addition to the complexity of designing specific surveys for each community, are typically prohibitive for scholars. Instead, I take advantage of the long time series and consistent battery of questions asked by the General Social Survey (GSS). The GSS administers a survey

to an average of 2,000 respondents representing adults living in non-institutional arrangements in the United States on a biennial basis. I create a new dataset built from restricted access GSS data from the 1998, 2000, 2002, 2004, 2006, and 2008 surveys.[156] To the GSS data set, I merge tract and MSA level census data from 1970. To measure contemporary neighborhood demographics, I add linearly interpolated data from the 1990 and 2000 Census of Population and Housing and the 2007-2011 American Community Survey. For tracts not included in the American Community Survey, I use 2000 census data for all years of the GSS. The combined dataset includes tract-level data for 12,188 respondents from 117 metropolitan areas with an average of about 100 respondents per metro area.[157] Although the GSS asks an enormous range of questions each year, only a subset of the survey questions is repeated. This repetition is crucial for my ability to estimate neighborhood effects because I rely on pooling across years to gain a large enough sample size. As a result, I restrict my analyses to questions that include at least 5,000 usable responses. At this threshold, the analyses include an average of 50 responses from each MSA. For the most part, my analyses only include white respondents, as this is the relevant population for my theory.[158] I begin by determining the demographic characteristics of individuals who live in neighborhoods that were defended/segregated in 1970. In this analysis, my dependent variable is the 1970 *Tract-Metro Difference in Percent White* described above. My independent variables include several demographic traits that are known to correlate with vote choice and ideology (Miller and Shanks 1996, Carmines and Stimson 1986, Green, Palmquist and Schickler 2002): the respondent's race (a dummy variable coded 1 for *White, non-*

156 These are the years for which the GSS was able to provide census tract level information for every respondent, which is essential to my analysis. The tract-level information was provided in response to a sensitive data request submitted to the National Opinion Research Center at the University of Chicago.
157 Respondents who live outside of metro areas are excluded from these analyses.
158 It is interesting to note that the results hold for non-white respondents as well. This adds further evidence to my claim that neighborhood context is associated with political conservatism above and beyond the aggregation of residents' demographic traits.

Hispanic)[159], *Age*, *Education* (where 0 is less than high school and 4 is a graduate degree), sex (coded 1 for *Female*), the total number of *Kids* under the age of 18 living at home, marital status (coded 1 for *Married*), and inflation adjusted *Income.*[160] I also add the variable *Mover*, that is coded 1 if the respondent lived in a different city or state when she was 16 years old and 0 if she has lived in the same city.[161] To account for the hierarchical structure of the data, I estimate a multilevel mixed-effects linear regression via maximum restricted likelihood, with random effects at the MSA level. This strategy adjusts the estimates and their errors for place-based correlations in attitudes. Table 7.3 presents the results (summary statistics are shown in appendix Table A7.2).

Table 7.3: Modern Demographic Characteristics of 1970 Neighborhoods

	β	SE	P>|z|
White, non-Hispanic	0.104	0.004	0.000
Age	-0.001	0.000	0.000
Education	0.003	0.001	0.018
Female	-0.008	0.003	0.013
Kids at home	-0.003	0.002	0.082
Married	0.019	0.004	0.000
Income	0.000	0.000	0.000
Mover	0.031	0.003	0.000
Constant	-0.057	0.009	0.000
Random effects parameter	0.069	0.005	
N	10,701		
Number of MSAs	117		

Note: Mixed effects maximum likelihood regression with random effects for MSA

[159] The GSS has a relatively small sample of non-Black racial and ethnic minorities, so I combine all nonwhite racial/ethnic categories.

[160] Approximately 10% of the observations are missing income data. I imputed observations by regressing income on age, education, gender, race, work status, marital status, the number of people in the household, the size of the city, the presence of children at home, and dummy indicators for year for the non-missing observations, generating predicted values, and replacing the missing observations with the predictions.

[161] Ideally, we would like to know whether or not the respondent moved neighborhoods as well, but the GSS does not ask this question.

The estimation reveals few surprises. For example, holding all other variables at their mean values, white respondents live in neighborhoods that were whiter than the metro area in 1970 (0.06), while respondents of color live in neighborhoods that were less white (-0.04). More educated respondents live in neighborhoods that were whiter, as do married, and higher income respondents. Respondents who had moved cities or states since they were 16 chose neighborhoods that were about 4 percentage points whiter than the metro area. Respondents who live in the same city tend to live in neighborhoods that mirrored the metro area. Those with children living at home tend to live in neighborhoods that were less white in 1970, but among middle and high-income respondents this effect reverses. That is, middle and high-income families with kids at home live in significantly whiter neighborhoods.[162] A similar interactive effect occurs with age. Among the poor, older residents live in neighborhoods that were significantly less white in 1970, but among middle and high-income residents, there is no relationship between age and neighborhood characteristics. These results point to several interesting conclusions. First, the results appear to indicate that neighborhoods that were whiter than the metro area in 1970 are more expensive and more desirable. They also suggest that sorting is likely to have played a role in the development of ideology and partisanship of particular places. Finally, these results indicate that it is necessary to control for all of these individual demographic characteristics in any estimation seeking to identify neighborhood effects. I turn to this task next.

I begin with an overview of individual-level partisan affiliation and ideology. I use the 1970 *Tract-Metro Difference in Percent White* as my independent variable in all analyses. My

[162] This interactive relationship is available upon request.

first dependent variable is the respondent's *Partisan Identification*. Respondents were asked, "generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?" Follow up questions asked for the strength of partisanship and pushed independents to identify as leaners. The resulting measure is a seven-point scale running from strong Democrat to strong Republican. Next, I analyze *Ideology* (where 1 is extremely liberal and 7 is extremely conservative), and finally *Republican Presidential Vote*, coded 1 if the respondent voted for the Republican candidate in the most recent election and 0 otherwise.[163] I control for all of the demographic traits included in Table 6.3 except one – *Mover*. I omit this variable because it is missing for a large share of the total observations. Its inclusion does not affect the results presented (and the coefficient is not significant in any of the estimations). In a second set of analyses, I add controls for current neighborhood attributes to provide additional evidence that the political character of neighborhoods was developed historically. These neighborhood variables are the *Percent White* and *Percent Homeowners* in the tract, linearly interpolated for each year of the survey. Both sets of analyses are presented in Table 7.4.

[163] For this last analysis, I use a multi-level mixed effects logistic regression to account for the binary dependent variable.

Table 7.4: Effect of 1970 Neighborhood Whiteness on Modern Partisanship & Conservatism									
	Partisan Identification			**Political Ideology**			**Republican Pres. Vote**		
	β	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	1.003	0.241	0.000	0.963	0.190	0.000	1.259	0.318	0.000
Age	-0.001	0.001	0.555	0.010	0.001	0.000	0.011	0.002	0.000
Education	-0.051	0.019	0.008	-0.113	0.015	0.000	-0.005	0.022	0.831
Female	-0.310	0.043	0.000	-0.194	0.034	0.000	-0.150	0.050	0.003
Kids at home	0.107	0.025	0.000	0.080	0.020	0.000	0.140	0.028	0.000
Married	0.326	0.049	0.000	0.342	0.039	0.000	0.303	0.056	0.000
Income ($100k)	0.417	0.058	0.000	0.177	0.046	0.000	0.477	0.066	0.000
Constant	2.845	0.091	0.000	3.590	0.071	0.000	-1.446	0.112	0.000
	β	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	0.899	0.254	0.000	0.898	0.197	0.000	1.131	0.332	0.001
Age	-0.002	0.001	0.168	0.009	0.001	0.000	0.010	0.002	0.000
Education	-0.045	0.019	0.018	-0.106	0.015	0.000	0.000	0.022	1.000
Female	-0.315	0.043	0.000	-0.198	0.034	0.000	-0.155	0.050	0.002
Kids at home	0.096	0.025	0.000	0.068	0.020	0.000	0.130	0.029	0.000
Married	0.298	0.049	0.000	0.317	0.039	0.000	0.276	0.056	0.000
Income ($100k)	0.355	0.059	0.000	0.118	0.047	0.012	0.420	0.068	0.000
% White Tract	-0.153	0.146	0.294	-0.232	0.113	0.040	-0.052	0.175	0.768
% Homeowners Tract	0.635	0.122	0.000	0.633	0.096	0.000	0.595	0.144	0.000
Constant	2.646	0.125	0.000	3.446	0.097	0.000	-1.703	0.153	0.000
Random effects parameter	0.130	0.026		0.052	0.012		0.247	0.046	
N	8,049			6,558			7,563		
Number of MSAs	116			116			116		

Note: Mixed effects maximum likelihood regression with random effects for MSA; white non-Hispanic respondents only

As was true in the aggregate, at the individual level, the historical persistence of neighborhoods is clear. Places that had defended their exclusive white character as of 1970 are home to significantly more Republican and conservative residents today. This is the case even when we account for both individual and aggregate demographic traits that predict partisanship and ideology.

The same pattern holds when I replace the dependent variable with particular policy items.[164] Respondents who live in neighborhoods that were whiter in 1970 are more likely to view government spending as adequate or too high on categories like social security, parks, and mass transit, and they are more likely to believe that individuals, not the government, should be responsible for health, wealth, and the standard of living.[165] For instance, respondents were asked to place themselves on a five-point scale where at one end the government should do more to solve our country's problems and at the other end the government should leave things to individuals and private businesses. Comparing whites who live in neighborhoods that were minority dominated in the 1970s to those who live in neighborhoods that were white defended moves responses in a conservative direction by about a half of a standard deviation on this scale (from an average of 2.8 to 3.3).

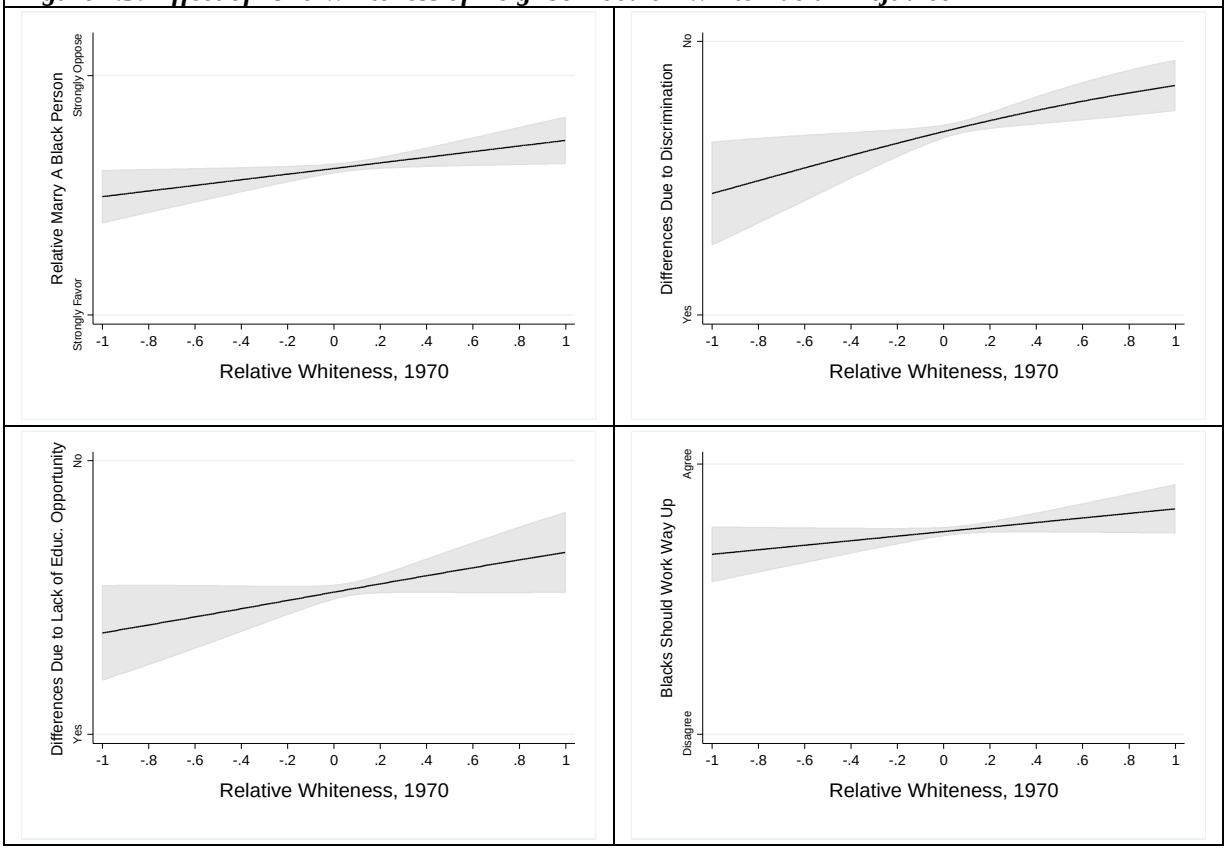
[164] These questions were not asked of all respondents in all years. As a result, in some of the specific policy areas discussed below the total number of respondents falls below 5,000. However, it never falls below 3,000.
[165] One question on which 1970 neighborhood whiteness was not associated with support for lower spending was education. When asked whether or not the government was spending the right amount "improving the nation's education system", there was no difference in the responses of individuals who live in neighborhoods that were whiter in 1970. Although this is obviously circumstantial evidence, it is plausible that the defended neighborhoods have higher quality schools and this is a feature that attracts certain residents who are supportive of higher educational expenditures.

Prejudice and Policy

If integration battles are linked to the ideology of defended neighborhoods, then we would expect residents of these places to have particularly conservative views when it comes to race. I find strong support for this contention. There are many different questions that tap racial views included in the GSS. I use several as dependent variables that are both common in the literature and have a long enough time span to generate sufficient respondents. I begin with an analysis of racial affect and prejudice. The first question asks respondents whether or not they would be in favor of having a family member marry a black person. The second question probes views on inequality. It states "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people." Then it asks: "Do you think these differences are mainly due to discrimination?" and/or "Because most (Negroes/Blacks/African-Americans) don't have the chance for education that it takes to rise out of poverty?" Finally, I analyze responses to the question, "Do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with the following statement: Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without special favors."

All dependent variables are coded so that higher values equate to a more conservative position. The structure of these analyses is the same as those included in the top panel of Table 7.4 (mixed effects maximum likelihood estimation with random effects for MSAs and controls for individual demographic characteristics). Rather than present regression tables, Figure 7.3 graphically display the marginal effects on *Tract-Metro Difference in Percent White, 1970* holding all other variables at their mean values.

Figure 7.3: Effect of 1970 Whiteness of Neighborhood on White Racial Prejudice



The results presented in Figure 6.3 offer a consistent picture of white residents who live in neighborhoods that were whiter than the metro area in 1970. They are more strongly opposed to having a relative marry a black person, they are less likely to see persistent racial inequality in jobs, income, and housing as the result or discrimination or educational opportunities, and they are more likely to agree that blacks should have to work their way up like white ethnic groups In sum, residents of whiter neighborhoods are more likely to want to avoid close contact with blacks, to blame blacks for conditions of inequality, and put the onus on individuals to advance their position.

These attitudes translate into conservative views on race-targeted policies. To show this, I analyze two questions. The first question reads "Some people think that (Blacks/Negroes/African Americans) have been discriminated against for so long that the government has a special obligation to help improve their living standards. Others believe that the government should not be giving special treatment to (Blacks/Negroes/African Americans). Where would you place yourself on this scale?" Responses were coded on a five-point scale ranging from strong obligation to no special treatment. The second question focuses on affirmative action and asks whether or not respondents are "for or against preferential hiring and promotion of blacks." The responses are coded on a five-point scale ranging from strongly favoring to strongly opposing. Figure 7.4 presents the marginal effects of the regression of these policy responses on *Tract-Metro Difference in Percent White, 1970* holding all other variables at their mean values.

Figure 7.4: Effect of 1970 Whiteness of Neighborhood on Support for Race-Targeted Policy

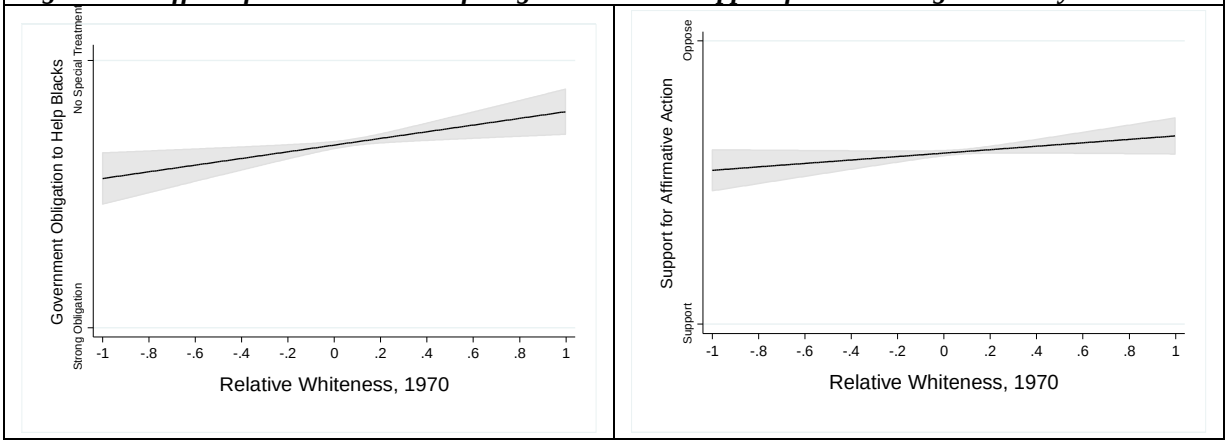


Figure 7.4 reveals that residents who live in neighborhoods that were whiter in 1970 are more likely to hold conservative views on race-targeted policy. They are less likely to feel that the

government has an obligation to make right discrimination against blacks and less likely to support affirmative action.

Conclusion

In sum, there is strong evidence that the language and ideology developed around integration battles in post-war urban America persists. During the tumultuous 1940s, 50s, and 60s, faced with changing legal and rhetorical regimes, white homeowners seeking to keep minorities out of their neighborhoods began to shed the language of racial exclusivity. They understood the defense of their homes and spaces as a defense of their rights as homeowners and freedoms as individuals. Hayward (2013) describes this as the development of an "identity story," a story about "who 'we Americans' are: about what we value, what we want and deserve, and what it is that serves our good" (p119). Hayward is clear though – the Americans included in this vision were not all Americans, but rather all *white* Americans.[166] Yet, the privileged residents of defended neighborhoods promulgated the argument that "race doesn't matter" (Hayward 2013, p176). Instead, they relied on a frame that emphasized their hard work, frugality, and investment in their children's education. This perspective persists in these places. This chapter links 1970s neighborhood demographics to feelings of distance from African Americans, a belief that racial inequality is the result of lack of individual motivation, opposition to policies that redress disparities in outcomes across racial groups, and commitment to conservatism more generally. Residents who live in defended neighborhoods today are more

[166] Hayward (2013) situates the genesis of this identity story earlier in the 20th century than I do here. She argues that it was borne of economic need among developers seeking land use planning and financial support from the government. My narrative is not incompatible with her view. It makes sense that the language adopted by rights-oriented white neighborhoods was readily available when they needed to use it. Hayward argues that the narrative of Americans as a homeowning people developed by real estate interests functioned as a "frame to many ordinary stories" (p167).

likely to identify as Republicans and more likely to vote for Republican presidential candidates.

The local roots of modern conservatism are deep.

Chapter 8: Conclusion

In the early decades of the 20th Century, homeownership rates in the United States were already much higher than in many other advanced democracies. As of 1914, in the United Kingdom 10% of households owned their homes (House of Commons Research Paper, 1999). In the United States the figure was about 45%.[167] During the late 1940s homeownership rates for France and Germany were about 31% and 27% respectively (Kohl 2014). For most families, the home was (and is) the single largest component of household wealth (Knoll et al 2014). Not only homeowners, but all property owners, land-oriented businesses (like real estate agencies), and local governments reliant on property taxes, had a strong incentive to protect and enhance the value of property. In a world of limited resources, they also had a strong incentive to politically control the distribution of public goods increasingly offered to city dwellers.

Yet, homeownership and political power were not equally available to all urban residents. In 1900, the homeownership rate among whites was more than double the rate among blacks (Collins and Margo 1999). Chinese and Japanese immigrants were barred from owning property completely in many states, and everywhere the vast majority of blacks, Asians, and Latinos were prohibited from voting (Keyssar 2000). Thus, as America became an urban nation, it was white property owners who dictated the policies of local governments. They used their power to pursue segregation. By invoking the power of land use regulation and zoning, city governments institutionalized prevailing race and class hierarchies.

In cities across the country, "Chinatowns" (McWilliams 1964, p105), Sonoratowns (Torres-Rouff 2013, p139) and "Niggertowns (Litwack 2004, p9) were walled-off by a combination of public policy, violence, and custom. Local governments then proceeded to

[167] https://www.census.gov/hhes/www/housing/census/historic/owner.html

systematically underinvest in these neighborhoods, denying them adequate sewers, paved roads, garbage collection, or public health initiatives. By the onset of the Second World War, city governments had become proficient segregators. When millions of dollars were spent renewing and rebuilding urban communities, segregation was reinforced and deepened.

By the hands of local governments the foundation of Sampson's (2012) powerful 21st century neighborhood effects, was laid. Using Chicago as a lens with which to view large, diverse cities, Sampson shows that today, neighborhoods differ significantly with respect to "crime, poverty, child health, protest, leadership networks, civic engagement, home foreclosures, teen births, altruism, mobility flows, collective efficacy, [and] immigration" (p6). These differences, Patrick Sharkey (2013) explains, are "*not* attributable primarily to factors that lie within the home or within the individual," but rather to the place itself, passed down from generation to generation (p21). Sampson (2012) argues that, as a result of racial segregation, neighborhood disadvantage is "most pronounced in the black community." These inequalities, Sampson tells us are, "durable and multiplex but not inevitable or natural" (p99).

The consequences are irrefutable. Scholars have persuasively demonstrated that segregation causes higher poverty rates for blacks and lower poverty rates for whites (Ananat 2011), lower high school and college graduation rates among blacks (Cutler and Glaeser 1997), higher imprisonment rates (Burch 2014), and higher rates of single-motherhood among blacks (Cutler and Glaeser 1997). Neighborhood disadvantage is also related to black/white income inequality, lack of employment stability among blacks, and larger gaps in cognitive skills between blacks and whites (Sharkey 2013). Cohen and Dawson (1993) show that neighborhood poverty undermines blacks' attachment to and involvement in the political system. I've shown that segregation leads to racial political polarization and underfunding of public goods.

Cumulatively, these results suggest that both growing up and living in disadvantaged places, while not wholly determining one's fate (e.g. Vance 2016), does leave little margin for error. "Mobility out of the poorest neighborhoods," Sharkey (2013) says "may be even less common than mobility out of individual poverty" (p35). Perversely, home ownership in this environment serves to limit mobility rather than enhance it.

In the first half of the 20th century, advantaged and disadvantaged neighborhoods resided within the political boundaries of large central cities. In the second half of the century, when the suburbs captured most of the population growth, the physical, and more importantly political, distance between advantage and disadvantage widened. Today, the most advantaged places are located outside of central cities altogether so that the most disadvantaged residents have no direct role to play in decisions about building affordable housing, expanding public transportation, or diversifying schools. In these places residents are more politically conservative; they vote at higher rates for Republican presidential candidates, support low taxes, want limited spending, and see inequality as the result of individual failings. Recent research suggests that privatization of public services is the most recent response to integration. Trounstine (2015) finds that a greater share of communities' security and educational needs are met through private provision in more diverse communities. Similarly, Betts and Fairlie (2003) show that native-born American families are more likely to send their children to private high school in response to increased immigration. Given this distribution of preferences and opinions, proposals to reduce inequality through mechanisms like regional governments or tax-base sharing (e.g. Orfield 2002, Katz 1999) are simply politically infeasible.

However, moving the policy debate to the state or federal level, could be more workable. Given that property owners' anxiety about protecting their investment is the driver of the many

patterns I reveal in this text, one solution would be to address this concern directly. William Fischel (2015), has argued that reducing federal tax-subsidies for owner-occupied housing would curtail homeowner demands for exclusivity.

State governments may also be able to make significant progress in generating outcomes that approach equality. There are lessons to be learned from the history of public school provision and finance. In a detailed historical analysis comparing the Charlotte and Atlanta metropolitan areas, Lassiter (2006), finds that the large geographic footprint of Charlotte's school system ensured that school integration would be successful. Conversely, Atlanta's fragmentation ensured that it failed. This indicates that states could analyze school district and municipality incorporation with an eye toward integration; limiting fragmentation and opportunities for segregation. Lafortune, Rothstein, and Schanzenbach (2015) show that recent school finance equalization policies have focused not on the gap in funding between advantaged and disadvantaged districts, but rather on ensuring a minimum adequate level of funding for all districts. They find that these reforms significantly reduce inequalities in student achievement outcomes between districts.

School finance reform has been possible because state constitutions guarantee the provision of public schooling and lawsuits (and threats of lawsuits), have forced the hand of state legislatures. Education is not the only public good guaranteed in state constitutions though. In fact, state constitutions are the locus of many positive rights. As Zackin (2013) details, they also obligate state governments to "care the poor, aged, and mentally ill, preserve the natural environment…and protect debtors' homes and dignity" (p3). Bridges (2015) demonstrates that state constitutions provide state governments substantial authority in the regulation of water provision and the protection of labor. Leonard (2010) outlines state constitutional requirements

mandating provision of health care and public health. Thus, the centralization of public goods financing, or at least the provision of a minimum level of public goods support through state governments is possible, though obviously politically contentious. At the end of the day, what is clear is that much is at stake in the local provision of public goods and the politics of segregation.

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Data Appendix

Chapter 1

Coding of Foreign Born Populations 1900-1940

The Census of Population and Housing collected detailed breakdowns regarding the origin of immigrant populations for large cities between 1900 and 1940. However, the categories of origin changed from Census to Census. I created similar categories by combining subcategories (e.g. I created a Poland variable by combining Austrian Poland, German Poland, and Russian Poland). Using the table available at: http://www.census.gov/population/www/documentation/twps0029/tab04.html, I created a category of immigrants from Southern and Eastern Europe, Asia, and Latin America. Because immigrants from Turkey in Asia were only separately categorized in some Census years, all Turkish immigrants are coded as being Southern and Eastern European, regardless of continent. The category foreign born nonwhite was created by adding the foreign born populations from countries that the 1930 Census designated as sending a majority of immigrants who were classified as nonwhite (China, Japan, India, Mexico, and West Indies).[168] To generate a measure of foreign born diversity, I calculated a Herfindahl Index:

$$Diversity = 1 - \sum_{f=1}^{F} \pi_f^2$$

where, π_f is the population share of the foreign-born group f and F is the total number of foreign-born groups (52). The following foreign born groups were listed in Censuses 1900-1940. The table presents summary statistics for all 291 cities included in these data.

Country of Origin	Mean	Std. Dev.	Min	Max
Africa	0.01%	0.04%	0.00%	1.20%
Albania	0.00%	0.03%	0.00%	0.86%
Armenia	0.14%	0.56%	0.00%	13.11%
Atlantic islands	0.07%	0.82%	0.00%	22.96%
Australia	0.04%	0.11%	0.00%	1.27%
Austria	3.57%	4.23%	0.00%	52.56%
Azores	0.09%	1.02%	0.00%	18.64%
Belgium Luxemburg	0.48%	1.78%	0.00%	25.12%
Bohemia	0.11%	1.24%	0.00%	48.24%
Born at sea	0.00%	0.01%	0.00%	0.21%
Canada newfound	10.15%	12.52%	0.00%	86.47%
Central South America	0.15%	0.34%	0.00%	5.57%
China	0.34%	1.20%	0.00%	39.04%
Cuba West Indies	0.14%	1.23%	0.00%	43.85%
Czechoslovakia	1.41%	3.69%	0.00%	49.42%
Denmark	1.22%	2.67%	0.00%	29.90%
England	8.04%	4.65%	0.28%	40.52%

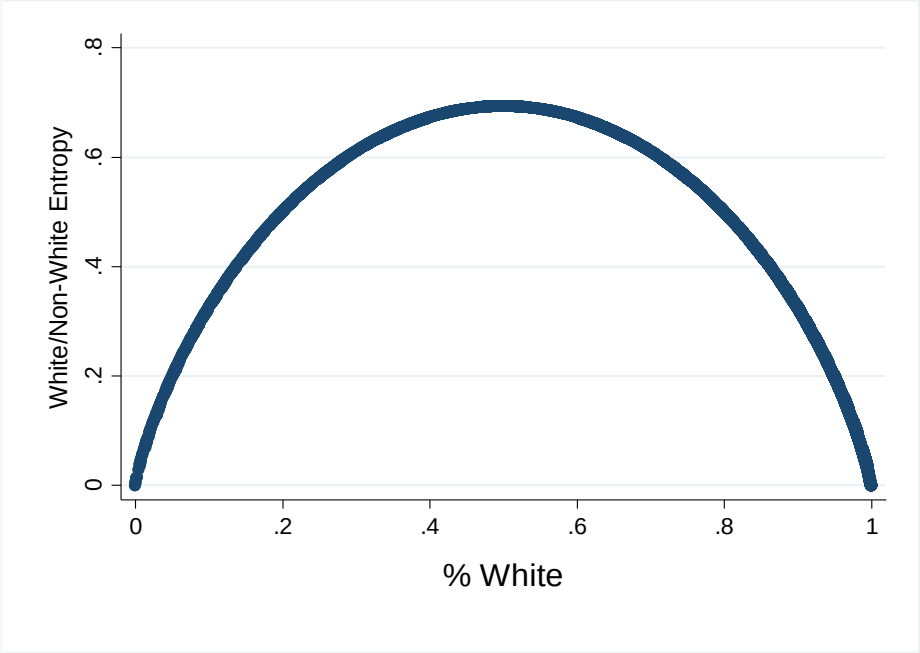
[168] Census of Population and Housing, 1930, Volume II, Chapter 5, "Country of Birth of the Foreign Born," page 231

Estonia	0.00%	0.00%	0.00%	0.02%
Europe, other	0.06%	0.14%	0.00%	3.17%
Finland	0.46%	1.70%	0.00%	21.42%
France	1.21%	1.25%	0.00%	14.62%
Germany	16.92%	14.66%	0.24%	89.81%
Greece	2.07%	2.58%	0.00%	23.83%
Holland	0.07%	1.09%	0.00%	46.72%
Hungary	2.44%	4.66%	0.00%	48.04%
Iceland	0.00%	0.00%	0.00%	0.08%
India	0.01%	0.02%	0.00%	0.47%
Ireland	9.71%	7.63%	0.03%	50.94%
Italy	9.47%	9.14%	0.00%	53.39%
Japan	0.24%	1.10%	0.00%	32.07%
Latvia	0.03%	0.16%	0.00%	2.76%
Lithuania	0.67%	1.48%	0.00%	12.26%
Mexico	1.48%	6.60%	0.00%	91.42%
Netherlands	0.86%	3.92%	0.00%	50.24%
Norway	1.49%	3.43%	0.00%	27.95%
Not specified	0.00%	0.02%	0.00%	0.57%
Other	0.99%	1.71%	0.00%	18.01%
Other Asia	0.09%	0.19%	0.00%	3.08%
Pacific Islands	0.01%	0.03%	0.00%	1.71%
Palestine Syria	0.32%	1.03%	0.00%	16.14%
Poland	6.81%	7.54%	0.00%	78.19%
Portugal	0.46%	1.88%	0.00%	18.82%
Russia	8.40%	7.06%	0.00%	71.83%
Scotland	2.62%	2.02%	0.05%	44.49%
Spain	0.29%	1.52%	0.00%	24.06%
Sweden	4.11%	7.00%	0.00%	71.64%
Switzerland	0.96%	1.09%	0.00%	9.27%
Syria	0.31%	0.92%	0.00%	15.72%
Turkey Bulgaria Romania	0.66%	1.09%	0.00%	16.93%
Wales	0.71%	1.60%	0.00%	26.78%
West Indies	0.28%	2.08%	0.00%	71.70%
Yugoslavia	0.72%	1.98%	0.00%	23.65%

A1.1: Summary Statistics Historical City Expenditures

Variable	N	Mean	Std. Dev.	Min	Max
Expenditures Per Capita (logged)	1,397	6.165	0.512	4.075	8.936
Density	1,397	11.993	8.870	0.747	79.009
Population (logged)	1,397	11.401	0.944	9.333	15.792
% Nonwhite	1,116	0.107	0.128	-0.031	0.558
% Homeowners	1,111	0.377	0.100	0.100	0.697
Foreign born diversity	1,057	0.834	0.089	0.233	0.938
Assessed Value (millions)	1,397	2.442	10.024	0.005	199.837
% Professionals	1,084	0.083	0.031	0.016	0.257

Figure A1.1: Relationship between City Level Entropy and % White



Chapter 2

Table A2.1: Summary Statistics Zoning Ordinances

Variable	Obs	Mean	Std. Dev	Min	Max
Zoning Ordinance	4,293	0.032	0.175	0.000	1.000
Expenditure $ Per Capita (logged)	4,293	3.346	0.413	1.305	6.165
Property Taxes $ Per Capita	4,293	19.798	8.045	1.794	66.837
Presidential turnout	4,293	0.514	0.177	0.013	0.991
Republican Vote Share	4,293	0.471	0.171	0.000	0.838
Midwest	4,293	0.314	0.464	0.000	1.000
North	4,293	0.422	0.494	0.000	1.000
South	4,293	0.195	0.396	0.000	1.000
West	4,293	0.070	0.255	0.000	1.000
% For. Born White	3,740	0.182	0.116	0.006	0.603
% For. Born Non White	3,740	0.005	0.024	0.000	0.398
% Black	3,654	0.081	0.125	0.000	0.557
Highways $ Per Capita	4,265	2.379	1.027	0.230	8.014
Health $ Per Capita	4,288	0.411	0.328	0.015	3.525
Fire $ Per Capita	4,293	2.148	0.815	0.364	10.945
Density	4,283	11.732	8.414	0.747	79.009
% Renters	3,577	0.628	0.101	0.303	0.903
% Employed in Manufacturing	3,554	0.533	0.137	0.109	0.838
% Employed in Agriculture	3,554	0.017	0.043	0.002	0.767
10 year population growth rate	3,592	0.327	0.410	-0.867	5.397
School segregation	4,293	0.223	0.412	0.000	1.000
% Unemployed	3,554	0.635	0.064	0.000	0.820

Chapter 3

Table A3.1: Summary Statistics Sewer Extensions, Historical Urban Ecological Dataset

Variable	Obs	Mean	Std. Dev	Min	Max
New Segments Since Last Census	541	37.20	138.45	0.00	1476.00
Total New Segments Since Last Census	541	1237.02	1953.43	0.00	5933.00
Total Segments in Ward	541	857.72	952.77	181.00	8375.00
% Segments Built	541	0.64	0.25	0.00	0.96
% Foreign Born	541	0.25	0.12	0.01	0.64
% Renters	271	0.74	0.13	0.34	0.98
Renter Segregation	541	0.09	0.03	0.04	0.14
% Black	541	0.08	0.14	0.00	0.95
Racial Segregation	541	0.47	0.16	0.29	0.86

Table A3.2: Summary Statistics: Public Sewer Connections

Variable	Obs	Mean	Std. Dev	Min	Max
% Public Sewer in Tract	146,102	0.773	0.328	0.000	1.000
% Nonwhite	146,102	0.203	0.280	0.000	1.000
Racial Segregation	146,102	0.216	0.197	0.000	0.915
% Renters	146,102	0.356	0.238	0.000	1.000
Renter Segregation	146,102	0.115	0.086	0.000	0.786
% Wealthy	146,102	0.183	0.155	0.000	1.000
City Population	146,102	392911	686109	59	3480384
City Public Sewer Connections	146,102	139100	261531	0.000	1269144
Midwest	146,102	0.234	0.423	0.000	1.000
South	146,102	0.307	0.461	0.000	1.000
West	146,102	0.229	0.421	0.000	1.000

Chapter 4

Table A4.1: Summary Statistics: Urban Renewal Applications and Disbursement

Variable	Obs	Mean	Std. Dev.	Min	Max
Racial Segregation, 1980	172	0.299	0.158	0.015	0.671
Renter Segregation, 1980	172	0.139	0.053	0.014	0.284
Urban Renewal Funds Approved, $100 million	173	0.466	0.734	0.000	5.481
Urban Renewal Funds Disbursed, $100 million	173	0.315	0.536	0.000	4.165
Segregation, 1950	173	0.398	0.153	0.095	0.908
% Owner occupied, 1950	173	47.127	11.692	12.400	70.700
Median Home Value, 1950 (log)	173	9.0	0.3	8.4	9.9
% Dilapidated, 1950	172	6.7	4.9	0.5	26.1
% Built Pre-1920, 1950	172	56.8	17.6	6.1	94.6
% Units w/o Plumbing, 1950	172	22.4	12.5	2.8	62.4
Population (millions), 1950	173	277794.0	702673.5	38946.0	7891957.0
% Nonwhite, 1950	173	11.7	11.9	0.1	44.0
% Employed Manufacturing, 1950	173	31.2	13.7	6.6	64.9
% Employed, 1950	173	94.6	1.9	88.3	98.0
Median Education, 1950	173	10.1	1.2	7.9	12.7
Family Income, 1950 (log)	173	8.1	0.1	7.6	8.6
% Incomes Below $2000, 1950	173	21.4	7.5	10.0	48.8
% Housing Operations	170	0.017	0.020	0.000	0.115
Public Housing Units Per Capita	173	1104.9	802.8	0.0	3819.0

Table A4.2 Summary Statistics Open Housing Initiative Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Opposed to Fair Housing	4,860	0.630	0.483	0	1
Democratic Presidential Voter	4,860	0.591	0.492	0	1
Home Owner	4,860	0.712	0.453	0	1
Education Level	4,860	3.305	1.365	1	6
Age	4,860	3.021	1.535	1	6
Economic Level	4,860	5.007	1.755	1	10
White	4,860	0.933	0.250	0	1
Union Member	4,860	0.305	0.461	0	1

Chapter 5

Table A5.1: Summary Statistics Segregation Across Cities

Variable	Obs	Mean	Std. Dev.	Min	Max
Across-City Share of Racial Segregation	618	0.4080	0.1799	0.0000	0.8793
Across-City Share of Renter Segregation	618	0.3501	0.1481	0.0000	0.8021
Across-City Share of Wealthy Segregation	618	0.2909	0.1737	0.0000	0.7650
Minority Mayor	618	0.2751	0.4469	0.0000	1.0000
Direct General Expenditure Per Capita	618	1.3443	0.9529	0.3131	9.9550
% Spent on Policing	618	0.1408	0.0511	0.0393	0.3244
Crime Rate	618	0.0917	0.0426	0.0000	0.4194
Population (logged)	618	12.0515	0.9916	9.8635	15.1231

Chapter 6

Table A6.1: Summary Statistics Racial Polarization Data

Variable	Obs	Mean	Std. Dev.	Min	Max
Largest Racial Divide	91	0.481	0.213	0.016	0.934
H Index – multi-group	91	0.376	0.119	0.183	0.635
H Index – two-group	91	0.353	0.114	0.156	0.614
Diversity	91	0.623	0.088	0.323	0.736
% Asian	91	0.067	0.074	0.008	0.318
% Black	91	0.275	0.181	0.030	0.815
% Latino	91	0.229	0.155	0.009	0.605
Median HH Income	91	36725	10114	17268	75982
% Renters	91	0.535	0.092	0.368	0.718
% College Ed	91	0.167	0.056	0.049	0.359
Biracial contest	91	0.725	0.449	0	1
Nonpartisan Election	91	0.714	0.454	0	1
Primary Election	91	0.352	0.480	0	1
Population (logged)	91	14.166	0.826	13.065	15.921
White Ideology	86	3.835	0.648	2.667	5.250

Table A6.2: Cities included in Racial Polarization Data

	Segregation		Largest Racial Divide, Number of Elections		
City Name	Mean H Index Multi-Group	Mean H Index Two-Group	Black/White	Latino/White	Black/Latino
Austin, TX	0.204	0.208	1		
Baltimore, MD	0.510	0.516	3	1	
Charlotte, NC	0.269	0.287	2		
Chicago, IL	0.572	0.460	7		1
Cleveland, OH	0.558	0.531	2		
Columbus, OH	0.316	0.284	3		1
Dallas, TX	0.359	0.339	4		1
Denver, CO	0.289	0.254	1	2	
Detroit, MI	0.398	0.255	1		1
Houston, TX	0.339	0.308	7		2
Indianapolis, IN	0.292	0.293			1
Jacksonville, FL	0.233	0.222	2		
Los Angeles, CA	0.351	0.366	3		5
Memphis, TN	0.470	0.474	2		
Milwaukee, WI	0.423	0.360	3		
New York, NY	0.468	0.474	5	3	1
Oklahoma, OK	0.231	0.165	1		
Philadelphia, PA	0.492	0.487	5		
Phoenix, AZ	0.255	0.270		1	
San Antonio, TX	0.237	0.225		4	
San Diego, CA	0.255	0.266	3		1
San Francisco, CA	0.223	0.161	3		1
San Jose, CA	0.186	0.198		2	1
Tucson, AZ	0.185	0.192	1		
Washington, DC	0.464	0.491	3		

Table A6.3: Summary Statistics Census of Government Finance and Population

Variable	Obs	Mean	SD	Min	Max
Direct General Expend per cap	16,831	1.332	1.304	0.022	78.010
Highways per cap	16,642	0.090	0.060	0.000	1.225
Parks per cap	16,673	0.209	0.109	0.000	1.746
Police per cap	15,809	0.069	0.073	0.000	2.564
Sewers per cap	13,832	0.106	0.089	0.000	1.762
Welfare, Health & Housing per cap	13,203	0.066	0.156	0.000	6.321
Own Source Revenue per cap	16,830	1.065	1.174	0.020	84.284
Two-Group H Index	16,831	0.074	0.094	0.000	0.767
Diversity	16,831	0.321	0.190	0.005	0.778
% Black	16,831	0.099	0.153	0.000	0.980
% Asian	16,831	0.034	0.057	0.000	0.674
% Latino	16,831	0.111	0.165	0.000	0.987
5 yr Δ % Black	14,284	0.007	0.019	-0.101	0.229
5 yr Δ % Latino	14,284	0.016	0.020	-0.171	0.207
5 yr Δ % Asian	14,284	0.005	0.011	-0.056	0.128
Median income	16,831	60112	24654	17320	266887
% Local Gov Employees	16,831	3.364	0.992	0.302	11.606
% Renters	16,831	0.358	0.140	0.009	0.911
% Over 65	16,831	0.127	0.051	0.007	0.798
% College degree	16,831	0.167	0.103	0.003	0.618
Population (logged)	16,831	10.107	1.030	6.071	15.921
City Ideology	2,524	4.028	0.788	1.000	7.000
Population	16,831	52940	205791	433	8214426

Table A6.4: First Stage Regression of Segregation on Waterways and Population

	Direct General Expenditure		
	β	SE	P>|t|
# Waterways	0.005	0.00	0.00
Population(logged)	0.028	0.00	0.00
Lagged DV	0.000	0.00	0.00
Diversity	0.085	0.00	0.00
% Black	0.137	0.00	0.00
% Asian	-0.209	0.01	0.00
% Latino	0.001	0.00	0.69
Median Income (1000s)	0.000	0.00	0.00
% Local Gov. Employees	-0.001	0.00	0.01
% Renters	0.011	0.00	0.00
% Over 65	0.255	0.01	0.00
% College Grad	-0.003	0.01	0.66
Constant	-0.271	0.00	0.00
N	25,669		

Note: First stage of two stage least squares regressions with fixed effects for regions and year (not shown); Instrumented: Two-group H Index of segregation; Excluded Instruments: # of Waterways, Population logged

Table A6.5: Summary Statistics Sewer Overflows, EPA

Variable	Obs	Mean	SD	Min	Max
Logged Overflows per capita	1,417	0.508	1.353	0.000	25.548
Racial Segregation	1,417	0.028	0.060	0.000	0.559
Population (logged)	1,417	8.414	1.701	3.091	15.122
% Renters	1,417	0.324	0.124	0.000	0.796
% Urban	1,417	0.609	0.467	0.000	1.000
% Black	1,417	0.086	0.164	0.000	0.978
% Asian	1,417	0.012	0.025	0.000	0.314
% Latino	1,417	0.053	0.092	0.000	0.884
Median Income (1000s)	1,417	37623	14287	13516	190805
Subventions Per Capita (1000s)	1,417	391.648	1397.263	0.000	50670.790

Chapter 7

Table A7.1 Summary Statistics: Democratic Vote Share, 2008, Harvard Elections Database Archive

Variable	Obs	Mean	Std. Dev.	Min	Max
% Democratic Vote, 2008	44,958	0.623	0.200	0.054	1.000
Tract-Metro Difference in % White, 1970	44,958	0.019	0.216	-0.939	0.553
% White 2000	44,958	0.637	0.320	0.000	1.000
% Renters 2000	44,958	0.377	0.249	0.000	1.000
% Wealthy 2000	44,958	0.167	0.159	0.000	1.000
Density	44,958	0.003	0.005	0.000	0.089
Midwest	44,958	0.241	0.427	0.000	1.000
South	44,958	0.298	0.458	0.000	1.000
West	44,958	0.226	0.418	0.000	1.000
Proportional Tract-Metro Elevation Diff.	44,956	-0.195	0.556	-1.007	19.336
Waterfront Tract	44,958	0.203	0.402	0.000	1.000
Distance to City Center (logged)	44,958	9.692	1.010	3.643	12.228

Table A7.2 Summary Statistics: Modern Partisanship and Conservatism, General Social Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Partisan Identification	11,674	2.680	1.953	0.000	6.000
Political Ideology	9,376	4.039	1.419	1.000	7.000
Republican Pres. Vote	10,804	0.334	0.472	0.000	1.000
Tract-Metro Difference in % White, 1970	11,674	0.039	0.182	-0.863	0.342
White, non-Hispanic	11,674	0.689	0.463	0.000	1.000
Ago	11,674	46	17	18	89
Education	11,674	1.624	1.213	0.000	4.000
Female	11,674	0.555	0.497	0.000	1.000
Kids at home	11,674	0.617	1.049	0.000	8.000
Married	11,674	0.457	0.498	0.000	1.000
Income	11,674	51987	42442	407	178266
Mover	10,640	0.617	0.486	0.000	1.000
% White Tract	11,674	0.649	0.296	0.000	0.994
% Homeowners Tract	11,674	0.617	0.247	0.000	0.995

ATTACHMENT TO LETTER 65

ORDINANCE NO. 1 (NCFPWIA)

AN ORDINANCE OF THE NAPA COUNTY FLOOD PROTECTION AND WATERSHED IMPROVEMENT AUTHORITY, IMPOSING A 1/2% NAPA COUNTY FLOOD PROTECTION TRANSACTIONS (SALES) AND USE TAX PURSUANT TO THE PROVISIONS OF REVENUE AND TAXATION CODE SECTION 7285.5, ESTABLISHING A NAPA FLOOD PROTECTION AND WATERSHED IMPROVEMENT EXPENDITURE PLAN, ESTABLISHING A FINANCIAL OVERSIGHT COMMITTEE AND TECHNICAL ADVISORY PANEL, REQUIRING ANY FUNDS GENERATED AS A RESULT OF THE IMPOSITION OF THE NAPA COUNTY FLOOD PROTECTION TRANSACTIONS (SALES) AND USE TAX TO BE SPENT ON THE PROJECTS IDENTIFIED IN THE EXPENDITURE PLAN, AUTHORIZING THE ISSUANCE OF BONDS OR OTHER OBLIGATIONS TO FINANCE THE PROJECTS IDENTIFIED IN THE EXPENDITURE PLAN PAYABLE FROM THE REVENUES GENERATED BY THE TRANSACTIONS (SALES) AND USE TAX AND ESTABLISHING AN APPROPRIATIONS LIMIT.

The Napa County Flood Protection and Watershed Improvement Authority (hereafter "Authority") does ordain as follows:

SECTION 1. Title

This Ordinance shall be known as the "Napa County Flood Protection Sales Tax Ordinance" (the "Ordinance") which establishes and implements a transactions and use tax (hereafter "Flood Protection Sales Tax") and establishes a Napa County Flood Protection and Watershed Improvement Expenditure Plan (hereafter "Plan") describing the specific projects for which the revenues received as a result of the imposition of the tax may be expended, all pursuant to Revenue and Taxation Code Section 7285.5. The transactions and use tax provisions of this Ordinance shall be applicable in the incorporated and unincorporated territory of the County of Napa. The County of Napa shall hereinafter be referred to as "District".

SECTION 2. Findings

The Authority finds that:

A. Since 1862, more than 27 major floods have plagued the Napa Valley, resulting in a significant loss of life and damage to property. Among the most damaging was the flood of 1986 which caused more than $140 million in damage and led to the evacuation of 7,000 residents. The 1995 flood damaged an estimated 227 businesses and residences at a cost of over $100 million.

B. In addition to these major and extremely serious floods, damage from the more common annual flooding—like the recent floods of January 1997—cost an annual average of $6 million in repairs and cleanup.

C. A Plan has been developed and is designed to protect the residents and businesses of Napa County from all floods up to and including a 100–year storm event.

D. The Plan is an integrated approach which applies to all the Napa County watersheds.

E. The Plan was developed by a unique and broad–based coalition of Napa County residents, including local community water experts, engineers, architects, environmentalists, business owners, government officials and other leaders.

F. The Plan relies on natural processes to protect Napa County residents and their properties, takes into account the Napa River's overall watershed, and envisions wetlands, open space, bypass channels, set–back levees, river widening by establishing flood plain terracing, elevation and relocation of homes and bridge replacements as its main weapons against flooding.

G. None of the projects in the Plan are intended or designed to encourage population growth in Napa County. All of the projects are for flood protection, preserving ground water integrity, reducing sediment in the Napa River system, and for maintaining the reliability of the water supply for the existing Napa County populationas of the effective date of this Ordinance.

H. The majority of the Plan will be paid for by federal money as well as state and existing local resources.

I. The ultimate goal of the Plan is to provide flood protection, save lives, protect property, restore the Napa River, Napa Creek, and other tributaries, maintain Napa County's economic vitality, and enhance riparian environments.

J. The allocation of the Flood Protection Sales Tax revenues that will be generated as a result of the passage of this 1/2% transactions and use tax by the Authority and the subsequent approval by the People with a 2/3rds vote, shall be based on the amount of Flood Protection Sales Tax revenue generated by the various geographic areas within the County, subject to Section 20 of this Ordinance.

SECTION 3. Purpose and Intent

The Authority declares that, in passing this Ordinance, it is its intent to fund a Plan which will:

A. Minimize the County's vulnerability to major floods that have plagued Napa County, resulting in a significant loss of life and substantial damage to property;

B. Manage flood waters throughout Napa County, thereby providing benefits to Napa, Calistoga, St. Helena, Yountville, American Canyon, Angwin/Deer Park, and the unincorporated County areas;

C. Provide flood protection from all floods up to and including the 100–year storm event while avoiding environmentally damaging channelization and excessive dredging, and utilizing environmentally beneficial methods such as wetlands and open space, as well as bypass channels, set–back levees and floodwalls, river widening by establishing flood plain terracing, elevation and/or relocation of homes, floodproofing of businesses, and bridge replacements;

D. Minimize flood damage, save lives, protect property, safeguard the environment, maintain the economic viability of Napa County and avoid to the greatest extent possible the need for flood insurance;

E. Provide for water reliability and wastewater treatment, using accepted watershed management practices, to maintain water quality in the Napa River;

F. Ensure ongoing community input in the finalization of all projects necessary for flood protection and water supply reliability for the existing Napa County population as of the effective date of this Ordinance.; and

G. Ensure ongoing involvement of all municipalities of Napa County in the implementation of the Plan by execution of a Joint Powers Agreement (JPA) between the Authority, Napa County, the Flood Control and Water Conservation District, and the incorporated Cities and Towns of Napa County. This agreement shall contain specific allocations and methods of distribution of the Flood Protection Sales Tax revenues based on the tax revenues generated by each of the incorporated and unincorporated areas in Napa County subject to section 20 of this Ordinance.

SECTION 4. Use of Flood Protection Sales Tax Revenues

A. The revenues generated by the Flood Protection Sales Tax shall be used to fund the projects included in the Plan. The revenues shall also be utilized to fund reasonable costs incurred in the administration of the Napa County Financial Oversight Committee and the Technical Advisory Panel which are established by this Ordinance.

B. The Napa County Auditor–Controller shall deposit all revenues received from the Flood Protection Sales Tax and all earnings thereon into the general fund of the Authority and the proceeds shall be used only for the projects identified in Sections 7 and 8 of this Ordinance, the administration costs identified in subparagraph (A) of this section, and the payment of bonds or other obligations issued to finance such projects and related financing costs.

SECTION 5. Equitable Distribution of the Flood Protection Sales Tax Revenues to County-Wide Projects

The distribution of the Flood Protection Sales Tax revenues to fund the projects described in this Ordinance, over the life of the tax, shall occur in a manner which is proportional to the Flood Protection Sales Tax revenues generated by each of the incorporated and unincorporated areas in Napa County. The portion of the distributions representing the share of the revenues allocated to the unincorporated area may be used to assist in paying for the flood protection projects involving incorporated areas that are described in this Ordinance.

Specific allocations and methods of distribution based on the amount of Flood Protection Sales Tax revenues generated by each of the incorporated and unincorporated areas in Napa County shall be specified in a Joint Powers Agreement which shall be developed following the enactment of the Flood Protection Sales Tax.

SECTION 6. Napa County Flood Protection and Watershed Improvement Expenditure Plan

The Plan involves the following two interrelated components which are described in greater detail in Sections 7 and 8 of this Ordinance:

A. The Napa River and Napa Creek Project for the City of Napa which will provide the City of Napa with flood protection from all floods up to and including a 100 year storm event; and

B. Countywide flood protection and watershed improvement projects for the communities of Calistoga, Yountville, St. Helena, Angwin/Deer Park, American Canyon, and the unincorporated areas

of Napa County.

SECTION 7. Approved Projects: City of Napa: Napa River and Napa Creek Flood Protection Project

The following component of the Plan involves the City of Napa:

The Napa River and Napa Creek Project as detailed and designed by the Community Coalition for Napa Flood Management and the Army Corps of Engineers. This project, approximately 50% of which is expected to be paid for by the Army Corps of Engineers, is designed to protect the City of Napa against all floods up to and including a 100–year storm event such as the floods of February, 1986 and January 1997. This environmentally restorative project includes the following components:

A. A dry bypass channel with a weir will be constructed to divert flood waters around the Oxbow (the extreme bend in the Napa River near First Street);
B. A tidal and floodplain terrace will be created;
C. Wetlands will be created on the east and west banks of the Napa River;
D. Toxics throughout the project area, including the Oil Company Road area, will be cleaned up and excavated to improve flood water conveyance and improve the water quality of the Napa River;
E. New bridges will be constructed so they do not act as obstructions during flooding;
F. Maintenance roads/recreation trails will be extended from Kennedy Park through downtown Napa to Trancas Street;
G. Set-back levees and floodwalls will be constructed;
H. Properties will be purchased and/or relocated if necessary to implement the Plan; and
I. Capital improvement maintenance of the project.

SECTION 8. Approved Projects: County–Wide Flood Protection and Watershed Improvement Projects Not Involving the City of Napa

The component of the Plan that involves the rest of the County must include the following projects which are designed to protect against flooding, improve water quality, preserve the integrity of ground water resources and/or stabilize water supply reliability for the existing Napa County population as of the effective date of this Ordinance. None of these projects are intended or designed to expand water capacity for growth and new development.

All of these projects shall be planned in accordance with the "Living River Guidelines" contained in the Community Coalition's Flood Management Plan and the Napa River Watershed Owners Manual of the Napa County Resource Conservation District.

The Technical Advisory Panel, which is established by Section 9(B) of this Ordinance, will be available to assist each municipality in project planning, upon request by the municipality or jurisdiction.

A. Community of Angwin/Deer Park
   1. Stabilization and enhancement of existing water reservoirs which shall be for the purpose of flood protection and water reliability; and

2. Stabilize water quality.

B. City of American Canyon
   1. Implement the adopted Flood Control and Storm Drain Master Plan to protect existing development; and
   2. Restore wetlands by replacing the existing wastewater treatment facility.

C. City of Calistoga
   1. Stabilization and enhancement of Kimball Reservoir which shall be for the purpose of flood protection and water supply reliability; and
   2. Flood protection and drainage improvements in the Grant Street area and other critical areas to protect residents and businesses from flooding.

D. City of St. Helena
   1. Flood management measures for the Napa River, Sulpher Creek, York Creek, and other tributaries to prevent flooding; and
   2. Construct urban stormwater run–off facilities at Fulton, McCorkle, Mills and other areas; and
   3. Stabilization and enhancement of Bell Canyon Reservoir, or other existing reservoirs, which shall be for the purpose of flood protection and water supply reliability.

E. Unincorporated Areas of Napa County:
   1. County unincorporated area flood damage reduction projects including elevating/relocating structures, including bridges, in the floodway and floodplain; and
   2. Agricultural watershed and stormwater runoff management improvements planned jointly by the agricultural industry, the County, the Napa County Resource Conservation District and the Department of Fish and Game, including projects which will:
      - Reduce the amount of storm runoff and sediment in the Napa River System from agricultural lands; and
      - Increase flood storage of the River system by the setback of active land uses from river and tributary banks.

F. Town of Yountville
   1. Flood protection for the Town's mobilehome parks and surrounding areas; and
   2. Hopper Creek and Beard Ditch improvements and restoration for flood protection.

In the event any project described in this Section is not economically or environmentally feasible, the legislative body having jurisdiction over the lands involved shall recommend to the Napa County Flood Control and Water Conservation District a replacement project. Only replacement projects that meet the criteria set forth in the first two paragraphs of this Section shall qualify and may be approvedprovided, however, that facilities for, or purchase of, North Bay Aqueduct or other water imported from outside Napa County shall not qualify as replacement projects. The Napa County Flood Control and Water Conservation District shall consider recommending approval of a replacement project to the Authority

only after obtaining the recommendation of the Financial Oversight Committee and the Technical Review Committee. Approval by the Authority shall be in the form of an amendment to this Ordinance. Changes meeting the above criteria, to the extent permitted by law, shall not need a vote of the People ratifying the amendment.

SECTION 9. Napa County Financial Oversight Committee and the Technical Advisory Panel

A. Financial Oversight Committee.

1. Establishment. A Napa County Financial Oversight Committee is hereby established and shall remain in existence for as long as the Flood Protection Sales Tax is in effect. The Financial Oversight Committee's purpose and charge is to inform the public regarding the expenditure of the Flood Protection Sales Tax proceeds that will be generated as a result of the approval of this Ordinance by the Authority and the electorate.

2. Responsibilities.

The Financial Oversight Committee shall be responsible for:

a. Providing the public with information regarding the manner in which the expenditure of the Flood Protection Sales Tax proceeds that will be generated as a result of the approval of this Ordinance by the Authority and the electorate has occurred;

b. Reviewing the expenditure of the Flood Protection Sales Tax proceeds that will be generated as a result of the approval of this Ordinance by the Authority and the electorate, and the proceeds received as a result of the issuance of any bonds or other obligations payable from the Flood Protection Sales Tax proceeds, and causing to be prepared an annual audit regarding the use of these proceeds;

c. Reviewing the financial impact of all projects, planned and approved, utilizing the Flood Protection Sales Tax proceeds that will be generated as a result of the approval of this Ordinance by the Authority and the electorate, and advising the public whether such projects are consistent with the purpose, spirit, intent and language of this Ordinance;

d. Informing the public if there is an expenditure of the Flood Protection Sales Taxes that will be generated as a result of the approval of this Ordinance by the Authority and the electorate which is inconsistent with the purpose and intent of this Ordinance.

e. Meet not less than once each calendar quarter, pursuant to the Ralph M. Brown Open Meeting Act and invite public participation and comment with respect to any expenditure or the implementation of any project envisioned by this Ordinance.

3. Membership.

a. The Financial Oversight Committee shall consist of the following individuals:

i. One representative recommended by each of the five Napa County City/Town Councils, and one representative recommended by the Board of Supervisors of the County of Napa. However, the representatives shall not be officers, agents, employees, or elected officials of any City in Napa County or the County;

ii. Two representatives each of whom must be recommended by the business community;

iii. One representative who must be recommended by the local media;

iv. One representative who must be recommended by the Napa County Taxpayers Association;

v. Two representatives each of whom must be recommended by the environmental community;

vi. One representative who must be recommended by the Friends of the Napa River; and

vii. Two representatives who must be recommended by the agricultural industry; and

viii. A certified public accountant, whose practice includes auditing public agencies, but who is

not currently acting as an independent auditor in the case of any incorporated area within the County of Napa or the County of Napa, who must be recommended by the representatives and appointees identified in subparagraphs (i) through (vii).

b. All representatives shall be appointed by the Board of Supervisors. However, no appointments shall be made by the Board of Supervisors other than from the recommended list of the public agencies or organizations identified in subdivision (A)(3)(a) above.

c. In addition to the sixteen members described above, the Financial Oversight Committee may recommend to the Board of Supervisors that it appoint up to two additional members if in the opinion of the Committee additional representation of individuals and groups located in Napa County is necessary.

d. No member of the Committee shall receive any salary or compensation for serving on the Committee. However, the Committee may, in the case of the Certified Public Accountant, upon the unanimous vote of the other members of the Committee, compensate said individual in an amount not to exceed the rate of compensation commonly charged by Certified Public Accountants in the City of Napa.

e. All members of the Committee, except for the Certified Public Accountant, shall be individuals who live in the incorporated or unincorporated areas of Napa County. The panel shall have resources sufficient to carry out their duties.

B. Technical Advisory Panel

1. Establishment. A Technical Advisory Panel is established and shall remain in existence for as long as the Flood Protection Sales Tax is in effect.

2. Membership. The Napa County Flood Control and Water Conservation District Board of Directors shall appoint the Technical Advisory Panel whose purpose and charge is to provide technical expertise in reviewing the Corps of Engineers proposed project which is located within the City of Napa to ensure consistency with the Community Coalition Project Plan. The Panel shall consist of no more than nine members. Members of the Panel shall have expertise in one or more of the following disciplines: (1) architecture, (2) landscape architecture, (3) civil engineering, (4) hydrology/hydraulics, (5) urban planning or design, (6) water and wastewater engineering (7) geotechnical engineering and/or (8) environmental sciences/natural resource management. All members shall demonstrate a thorough knowledge of and commitment to the "Living River Guidelines" and the "Urban Design Criteria" of the Community Coalition Flood Management Plan and the watershed management guidelines contained in the Napa River Watershed Owner's Manual of the Napa County Resource Conservation District, as well as sound engineering flood protection principles.

3. The Panel may provide technical expertise to review and comment on the planning of other Countywide projects.

4. The Panel is advisory to the Napa County Flood Control and Water Conservation District.

5. The Napa County Flood Control and Water Conservation District Board of Directors shall appoint the Panel to ensure its ongoing input and recommendations regarding the following Army Corps of Engineers documents prior to executing same:

a. The General Design Memorandum and related Environmental Impact Statement (EIS);

b. The Project Cooperation Agreement;

c. All preliminary plans and construction contracts, final plans and specifications related to the City of Napa Corps of Engineers project.

6. All members of the Panel shall be individuals whose domicile is in Napa County.

7. The panel shall have resources sufficient to ensure continuous onsite review of Army Corps of Engineers construction activities.

SECTION 10. Expiration of Tax; Extension of Tax.

A. The transactions and use tax imposed by this Ordinance shall expire June 30, 2018; provided, that if the Authority shall not have contracted with the State Board of Equalization on or before July 1, 1998, and as a result the operative date is the beginning of a calendar quarter subsequent to July 1, 1998, the expiration date shall be extended, for a period of time equal to the delay. Notwithstanding the preceding sentence, this tax may be extended beyond the twenty–year period if the question of extending the tax is placed on the ballot and approved by the legally required percentage of qualified voters voting on the extension.

B. This transactions and use tax may be reduced or rescinded by a majority vote of the Governing Board of the Authority; provided, however that such modification or rescission shall not occur if to do so would violate any law, including but not limited to Article I, §10 of the United States Constitution and Article I, §16 of the California Constitution or if prohibited by any covenant made with the holders of any bonds or obligations payable from this transactions and use tax. The Governing Board of the Authority shall take such action only after receiving a recommendation regarding such rescission or modification from the Financial Oversight Committee and, subsequent to such receipt, conducting a noticed public hearing. Such action shall be subject to California law pertaining to the cancellation of prior contractual obligations and the rules and regulations of the State Board of Equalization.

SECTION 11. Purpose.

This Ordinance is adopted to achieve the following, among other purposes, and directs that the provisions hereof be interpreted in order to accomplish those purposes:

A. To impose a one half of one percent retail transactions and use tax in accordance with the provisions of Part 1.6 (commencing with Section 7251) of Division 2 of the Revenue and Taxation Code and Section 7285.5 of Part 1.7 of Division 2 which authorizes the Authority to adopt this tax Ordinance which shall be operative only if two–thirds of the electors voting on this Ordinance approve same at an election called for that purpose.

B. To adopt a retail transactions and use tax Ordinance which incorporates provisions identical to those of the Sales and Use Tax Law of the State of California insofar as those provisions are not inconsistent with the requirements and limitations contained in Part 1.6 of Division 2 of the Revenue and Taxation Code.

C. To adopt a retail transactions and use tax Ordinance which imposes a tax and provides a measure therefor that can be administered and collected by the State Board of Equalization in a manner that adapts itself as fully as practicable to, and requires the least possible deviation from, the existing statutory and administrative procedures followed by the State Board of Equalization in administering and collecting the California Sales and Use Taxes.

D. To adopt a retail transactions and use tax Ordinance which can be administered in a manner which will be, to the greatest degree possible, consistent with the provisions of Part 1.6 of Division 2 of the Revenue and Taxation Code, minimize the cost of collecting the transactions and use taxes, and at the same time, minimize the burden of recordkeeping upon persons subject to taxation under the provisions of this Ordinance.

E. To establish an expenditure limit for the Authority as required by Article XIIIB of the California Constitution.

F. To authorize bonds and other obligations to be issued for the purpose of financing projects in the expenditure plan with said bonds or other obligations to be payable from the transaction and use tax proceeds.

SECTION 12. Operative Date; Contract with the State.

The operative date of this Ordinance, at which time collection of the tax imposed by this Ordinance shall commence, is July 1, 1998. Prior to July 1, 1998, the Authority shall contract with the State Board of Equalization to perform all functions incident to the administration and operation of this Transactions and Use Tax Ordinance; provided, that if the Authority shall not have contracted with the State Board of Equalization prior to the operative date, it shall nevertheless so contract and in such a case the operative date shall be the first day of the first calendar quarter following the execution of such contract.

SECTION 13 Transactions Tax Rate.

For the privilege of selling tangible personal property at retail, a tax is hereby imposed upon all retailers in the incorporated and unincorporated territory of the District at the rate of one–half of one percent of the gross receipts of any retailer from the sale of all tangible personal property sold at retail in said territory on and after the operative date of this Ordinance. The tax shall be imposed for a period of twenty years.

SECTION 14. Place of Sale.

For the purposes of this Ordinance, all retail sales are consummated at the place of business of the retailer unless the tangible personal property sold is delivered by the retailer or his agent to an out–of–state destination or to a common carrier for delivery to an out–of–state destination. The gross receipts from such sales shall include delivery charges, when such charges are subject to the state sales and use tax, regardless of the place to which delivery is made. In the event a retailer has no permanent place of business in the State or has more than one place of business, the place or places at which the retail sales are consummated shall be determined under the rules and regulations to be prescribed and adopted by the State Board of Equalization.

SECTION 15. Use Tax Rate.

An excise tax is hereby imposed on the storage, use or other consumption in the incorporated and unincorporated area of the District of tangible personal property purchased from any retailer on and after the operative date of this Ordinance for storage, use or other consumption in said territory at the rate of one–half of one percent of the sales price of the property. The sales price shall include delivery charges when such charges are subject to state sales or use tax regardless of the place to which delivery is made. The tax shall be imposed for a period of twenty years.

SECTION 16. Adoption of Provisions of State Law.

Except as otherwise provided in this Ordinance, and except insofar as they are inconsistent with the provisions of Part 1.6 of Division 2 of the Revenue and Taxation Code, all of the provisions of Part 1 (commencing with Section 6001) of Division 2 of the Revenue and Taxation Code are hereby adopted and made a part of this Ordinance as though fully set forth herein.

SECTION 17. Limitations On Adoption of State Law and Collections of Use Taxes.

In adopting this provisions of Part 1 of Division 2 of the Revenue and Taxation Code:

A. Wherever the State of California is named or referred to as the taxing agency, the name of this Authority shall be substituted therefor. However, the substitution shall not be made when:

1. The word "State" is used as a part of the title of the State Controller, State Treasurer, State Board of Control, State Board of Equalization, State Treasury, or the Constitution of the State of California;

2. The result of that substitution would require action to be taken by or against this Authority or any agency, officer, or employee thereof rather than by or against the State Board of Equalization, in performing the functions incident to the administration or operation of this Ordinance.

3. In those sections, including, but not necessarily limited to, sections referring to the exterior boundaries of the State of California, where the result of the substitution would be to:

a. Provide an exemption from this tax with respect to certain sales, storage, use or other consumption of tangible personal property which would not otherwise be exempt from this tax while such sales, storage, use or other consumption remain subject to tax by the State under the provisions of Part 1 of Division 2 of the Revenue and Taxation Code; or

b. Impose this tax with respect to certain sales, storage, use or other consumption of tangible personal property which would not be subject to tax by the state under the said provision of that code.

4. In Sections 6701, 6702 (except the last sentence thereof), 6711, 6715, 6737, 6797 or 6828 of the Revenue and Taxation Code.

B. The word "District" shall be substituted for the word "State" in the phrase "retailer engaged in business in this State" in Section 6203 and in the definition of that phrase in Section 6203.

SECTION 18. Permit Not Required.

If a seller's permit has been issued to a retailer under Section 6067 of the Revenue and Taxation Code, an additional transactor's permit shall not be required by this Ordinance.

SECTION 19. Exemptions and Exclusions.

A. There shall be excluded from the measure of the transactions tax and the use tax the amount of any sales tax or use tax imposed by the State of California or by any city, city and county,

or county pursuant to the Bradley–Burns Uniform Local Sales and Use Tax Law or the amount of any state–administered transactions or use tax.

B. There are exempted from the computation of the amount of transactions tax the gross receipts from:

1. Sales of tangible personal property, other than fuel or petroleum products, to operators of aircraft to be used or consumed principally outside the County in which the sale is made and directly and exclusively in the use of such aircraft as common carriers of persons or property under the authority of the laws of this State, the United States, or any foreign government.

2. Sales of property to be used outside the District which is shipped to a point outside the District, pursuant to the contract of sale, by delivery to such point by the retailer or his agent, or by delivery by the retailer to a carrier for shipment to a consignee at such point. For the purposes of this paragraph, delivery to a point outside the district shall be satisfied:

a. With respect to vehicles (other than commercial vehicles) subject to registration pursuant to Chapter 1 (commencing with Section 4000) of Division 3 of the Vehicle Code, aircraft licensed in compliance with Section 21411 of the Public Utilities Code, and undocumented vessels registered under Chapter 2 of Division 3.5 (commencing with section 9840) of the Vehicle Code by registration to an out–of–District address and by a declaration under penalty of perjury, signed by the buyer, stating that such address is, in fact, his or her principal place of residence; and

b. With respect to commercial vehicles, by registration to a place of business out–of–District and declaration under penalty of perjury, signed by the buyer, that the vehicle will be operated from that address.

3. The sale of tangible personal property if the seller is obligated to furnish the property for a fixed price pursuant to a contract entered into prior to the operative date of this Ordinance.

4. A lease of tangible personal property which is a continuing sale of such property, for any period of time for which the lessor is obligated to lease the property for an amount fixed by the lease prior to the operative date of this Ordinance.

5. For the purposes of subsections (3) and (4) of this section, the sale or lease of tangible personal property shall be deemed not to be obligated pursuant to a contract or lease for any period of time for which any party to the contract or lease has the unconditional right to terminate the contract or lease upon notice, whether or not such right is exercised.

C. There are exempted from the use tax imposed by this Ordinance, the storage, use or other consumption in this district of tangible personal property:

1. The gross receipts from the sale of which have been subject to a transactions tax under any state–administrered transactions and use tax Ordinance.

2. Other than fuel or petroleum products purchased by operators of aircraft and used or consumed by such operators directly and exclusively in the use of such aircraft as common carriers of persons or property for hire or compensation under a certificate of public convenience and necessity issued pursuant to the laws of this State, the United States, or any foreign government. This exemption is in addition to the exemptions provided in Sections 6366 and 6366.1 of the Revenue and Taxation Code of the State of California.

3. If the purchaser is obligated to purchase the property for a fixed price pursuant to a contract entered into prior to the operative date of this Ordinance.

4. If the possession of, or the exercise of any right or power over, the tangible personal property arises under a lease which is a continuing purchase of such property for any period of time

for which the lessee is obligated to lease the property for an amount fixed by a lease prior to the operative date of this Ordinance.

5. For the purposes of subsections (3) and (4) of this section, storage, use, or other consumption, or possession of, or exercise of any right or power over, tangible personal property shall be deemed not to be obligated pursuant to a contract or lease for any period of time for which any party to the contract or lease has the unconditional right to terminate the contract or lease upon notice, whether or not such right is exercised.

6. Except as provided in subparagraph (7), a retailer engaged in business in the District shall not be required to collect use tax from the purchaser of tangible personal property, unless the retailer ships or delivers the property into the District, or participates within the District in making the sale of the property, including, but not limited to, soliciting or receiving the order either directly or indirectly, at a place of business of the retailer in the district or through any representative, agent, canvasser, solicitor, subsidiary or person in the District under the authority of the retailer.

7. "A retailer engaged in business in the District" shall also include any retailer of any of the following: vehicles subject to registration pursuant to Chapter 1 (commencing with Section 4000) of Division 3 of the Vehicle Code, aircraft licensed in compliance with Section 21411 of the Public Utilities Code, or undocumented vessels registered under Chapter 2 of Division 3.5 (commencing with Section 9840) of the Vehicle Code. That retailer shall be required to collect use tax from any purchaser who registers or licenses the vehicle, vessel, or aircraft at an address in the District.

D. Any person subject to use tax under this Ordinance may credit against that tax any transactions tax or reimbursement for transactions tax paid to a district imposing, or retailer liable for, a transactions tax pursuant to Part 1.6 of Division 2 of the Revenue and Taxation Code, with respect to the sale to the person of the property the storage, use or other consumption of which is subject to the use tax.

SECTION 20. Bonds and Other Obligations.

Upon voter approval of this Ordinance, the Authority shall have the authority to issue bonds or other obligations (including, without limitation, lease or installment sales agreements) to finance any of the projects included in the Plan as it may be amended from time to time (including reserves and other financing costs), which bonds or other obligations shall be payable from the revenues of the Flood Protection Sales Tax. In allocating Flood Protection Sales Tax revenues all debt service requirements and other financing costs of such bonds and other obligations shall be met prior to allocating funds for any other purposes or projects.

SECTION 21. Amendments.

All amendments subsequent to the effective date of this Ordinance to Part 1 of Division 2 of the Revenue and Taxation Code relating to transactions and use taxes and which are not inconsistent with Part 1.6 of Division 2 of the Revenue and Taxation Code, and all amendments to Part 1.6 of Division 2 of the Revenue and Taxation Code, shall automatically become part of this Ordinance, provided, however, that no such amendment shall operate so as to increase the rate of tax imposed by this Ordinance or extend the period of time the tax will remain in effect.

SECTION 22. Enjoining Collection Forbidden.

No injunction or writ of mandate or other legal or equitable process shall issue in any suit, action or proceeding in any court against the State or the Authority, or against any officer of the State or the Authority, to prevent or enjoin the collection under this Ordinance, or Part 1.6 of Division 2 of the Revenue and Taxation Code, of any tax or any amount of tax required to be collected.

SECTION 23. Napa County Auditor-Controller Audit.

In addition to the audit required pursuant to Section 9(A)(2)(b), the Napa County Auditor–Controller shall annually conduct an audit of how the new transactions and use tax revenues are spent by the County of Napa. The audit shall be published in at least two County newspapers and copies of the audit shall be provided to, and must be available at, every public library located in the County.

SECTION 24. Severability.

If any provision of this Ordinance or the application thereof to any person or circumstances is held invalid or unconstitutional, such invalidity or unconstitutionality shall not affect other provisions or applications of this Ordinance which can be given effect without the invalid or unconstitutional provision or application, and to this end the provisions of this Ordinance are severable.

SECTION 25. Effective Date; Approval of the Voters.

This Ordinance shall take effect on March 3, 1998, but only if 2/3rds of the electors voting on the Ordinance at an election held on March 3, 1998, vote to approve this Ordinance.

SECTION 26. Annual Appropriation Limit.

The maximum annual appropriation limit for the Authority is $20,000,000.00, subject to such adjustments or increases as are provided for by law.

SECTION 27. Implementation Subsequent to Vote.

Upon approval of this Ordinance by 2/3rds of the voters, the Authority may adopt policies and take such actions as may be necessary for the implementation of the one–half of one percent (1/2%) transactions and use tax authorized by this Ordinance. Such actions shall include, but not be limited to, the Authority amending this Ordinance without being required to secure a ratification by the electorate to provide for use of additional federal, state or local funds, to account for unexpected revenues, or to take into consideration unforeseen circumstances, or if such amendments are deemed necessary and recommended by the Authority's general counsel, bond counsel, or legal counsel for the State Board of Equalization; provided, however, that no amendments that will increase the rate of the transactions and use tax rate or extend the term beyond twenty years may be

made without securing the approval of the amendment by the legally required percentage of qualified voters voting on the amendment.

SECTION 28. Publication of Ordinance.

This Ordinance shall be published at least once before the expiration of 15 days after its passage in the Napa Valley Register, a newspaper of general circulation published in the County of Napa, together with the names of the Directors voting for and against the same.

The foregoing Ordinance was introduced and read at a special meeting of the Napa County Flood Protection and Watershed Improvement Authority, held on the 28th day of October, 1997 and passed at a special meeting of the Napa County Flood Protection and Watershed Improvement Authority, held on the 4th day of November, 1997, by the following vote:

AYES:	**DIRECTORS**	VARRELMAN, LUCE, FERRIOLE, WINTER and RIPPEY
NOES:	**DIRECTORS**	NONE
ABSTAIN:	**DIRECTORS**	NONE
ABSENT:	**DIRECTORS**	NONE

Mike Rippey

MIKE RIPPEY, Chairman
Board of Directors

ATTEST:

MARY JEAN McLAUGHLIN
Clerk of the Board

By Teri Sisson
Deputy

APPROVED AS TO FORM
Office of County Counsel
By: [signature]
Date: 10/30/97

APPROVED NOV 04 1997
BOARD OF SUPERVISORS
COUNTY OF NAPA

MARY JEAN MCLAUGHLIN
CLERK OF THE BOARD

BY Michelle Price Deputy

ATTACHMENT TO LETTER 84

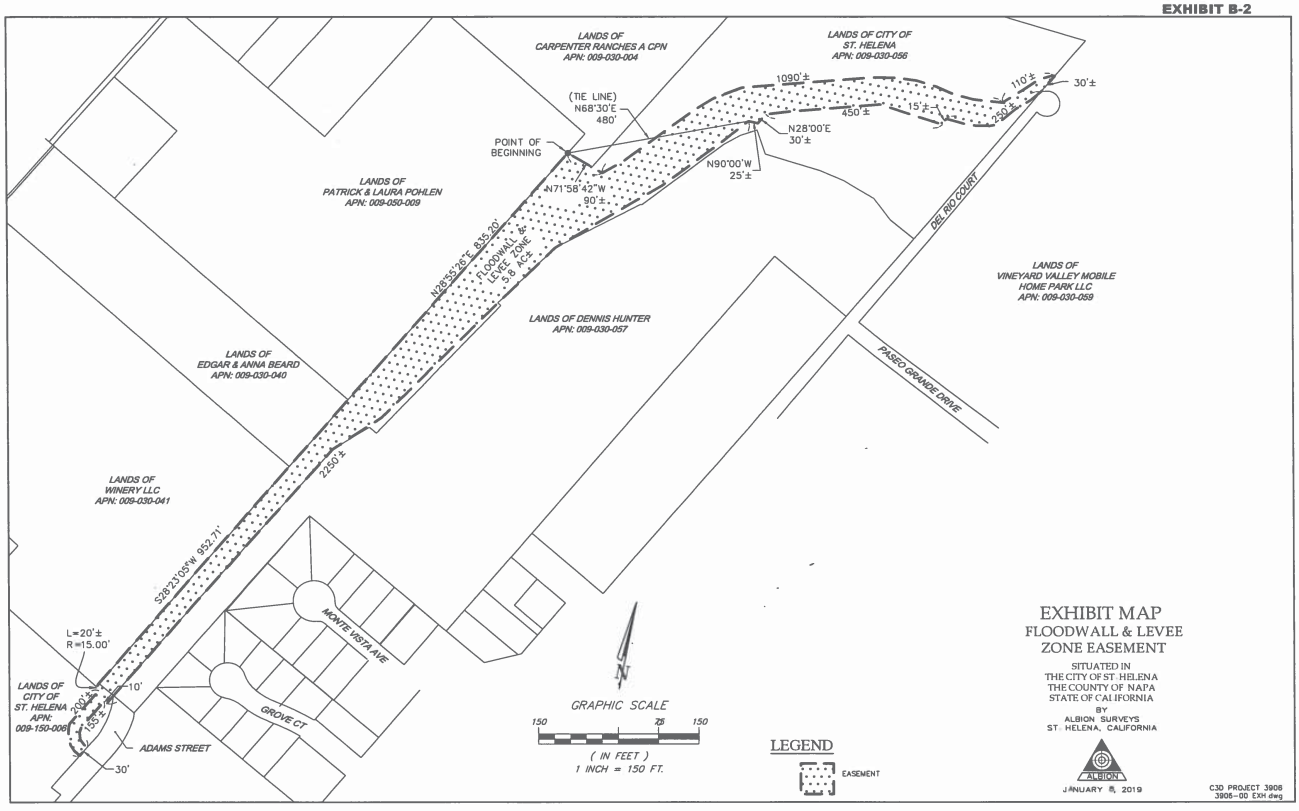


EXHIBIT B-2
LANDS OF CARPENTER RANCHES A CPN APN: 009-030-004
LANDS OF CITY OF ST. HELENA APN: 009-030-056
(TIE LINE) N68°30'E 480'
POINT OF BEGINNING
N71°58'42"W 90'±
N28°00'E 30'±
N90°00'W 25'±
1090'±
450'±
15'±
110'±
250'±
30'±
LANDS OF PATRICK & LAURA POHLEN APN: 009-050-009
N28°35'26"E 835.20'
FLOODWALL & LEVEE ZONE 5.6 AC±
DEL RIO COURT
LANDS OF VINEYARD VALLEY MOBILE HOME PARK LLC APN: 009-030-059
LANDS OF DENNIS HUNTER APN: 009-030-057
LANDS OF EDGAR & ANNA BEARD APN: 009-030-040
PASEO GRANDE DRIVE
2250'±
LANDS OF WINERY LLC APN: 009-030-041
S28°31'05"W 852.71'
L=20'±
R=15.00'
LANDS OF CITY OF ST. HELENA APN: 009-150-006
200'±
155'±
10'
30'
ADAMS STREET
GROVE CT
MONTE VISTA AVE
N
GRAPHIC SCALE
150 75 150
(IN FEET)
1 INCH = 150 FT.
LEGEND
EASEMENT
EXHIBIT MAP
FLOODWALL & LEVEE ZONE EASEMENT
SITUATED IN THE CITY OF ST. HELENA THE COUNTY OF NAPA STATE OF CALIFORNIA
BY
ALBION SURVEYS
ST. HELENA, CALIFORNIA
ALBION
JANUARY 8, 2019
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Potential Issues Related to the Adams Street Extension to the Silverado Trail

The Adams Street extension to the Silverado Trail could potentially create problems for the City's largest-ever public project, namely the St Helena Comprehensive Flood Control Project. While that street extension appears in the 1993 General Plan and the 2040 General Plan Update, it did not appear as part of any of the county, state or federal funding agreements, which were the funding sources for nearly all of the money used to build the flood control project. Nor did the street extension appear as part of permit applications or approvals required to build the levee or flood wall. While the original design of the Flood Control Project, which was done right after Measure A passed, showed a discretionary extension of the Adams Street to the Silverado Trail, it was not part of the project by the time the EIR was finalized, the RFP was let for the flood control project and all permitting, funding and approvals were done after 2006. There is, unfortunately, a common misconception in St Helena that the extension of Adams Street to the Silverado Trail was somehow approved as part of the Flood Control Project and because it appears in the 2040 GPU. There are, however, a number of other important issues related to this particular project.

1. There were at least six different funding sources for the Flood Control Project, almost all of which had specific requirements in order to obtain funding and some of those requirements extend into perpetuity. Two of the funding sources were federal, two were from the state, one was from the county and the last was from the City's own general fund. With the exception of the funds from the City's general fund, none of the five other funding sources considered the extension of the Adams Street to the Silverado Trail and its impact on the Flood Control Project in their approval of their funds for the levee and floodwall project.

   For example, the "Maintenance and Property Improved" section of one of the state funding sources states:

   "Grantee agrees to use, manage and maintain the property developed, rehabilitated or restored with the grant funds provided in this Agreement consistent with the purposes of the program and is required to continue into perpetuity or until deemed no longer necessary by the State."

At the very least it appears the City would need to get the state's approval to build the extension of Adams Street, since the road extension was not considered when the project was approved and funded and, therefore, would not be considered "consistent with the purpose of the program," which was entirely a flood control project and not in any way a road project.

In seeking the State's approval, however, the issue of whether or not the levee and flood wall have been maintained according to the Army Corp of Engineers standards (which is required by the Flood Control Project's operational and maintenance manual) will likely be examined. From documentation about the maintenance of the levee for the first five years from its completion through 2015, it is absolutely clear it had not been maintained according to the Army Corp of Engineer standards and, in fact, has had barely any maintenance. The documentation of the maintenance of the Flood Control Project from 2016 to the present has not been available, but it is clear from the hundreds of gopher holes appearing every year in both the levee and foundation of the flood wall, no other conclusion could be reached other than the maintenance of our largest project has not been robust, let alone up to acceptable standards. Residents have been taking pictures of the gopher holes appearing each year in the levee and flood wall, just in case it ever becomes an issue. According to Dr. Nicholas Pinter, a national levee expert currently at UCD, who has spent time examining the St Helena levee and the issues related to it, has said that burrowing animals on any levee is one of the signs that a levee is not being maintained appropriately. Keeping burrowing animals away from the levee is one of the first issues raised in the Flood Control Project's own operation and maintenance manual.

2. There were also at least eight state and federal permits or approvals required in order to build the levee, flood wall, terraces, etc. Many of these permits involved specific requirements and were issued without any consideration of the extension of Adams Street. While the 1993 General Plan Circulation Element showed Adams Street as a potential street extension to the Silverado Trail, it was not a factor considered in any decision to either issue required permits or in providing funding for the Flood Control Project. To now attempt to extend Adams Street to the Trail may jeopardize some of those permits and approvals. Examples of some of the unique permits and approvals required include:

    California Endangered Species Act Incidental Take Permit;

California Fish and Game Streambed Alteration Agreement;
US Army Corp of Engineers 404 Permit;
State Water Resources Control Board Section 401Water Quality Certification;
State Historic Preservation Office;
Bay Area Regional Water Quality Control Board National Pollution Discharge Elimination System permit; and
US Fish and Wildlife Service and Atmospheric Administration Fisheries Section 7 approval.

As an example, according to the staff report to the City Council dated May 24, 2016, the California Endangered Species Act Incidental Take Permit (ITP) No. 2081-2009-004-03 through the California Department of Fish and Wildlife (DFW) required, as a mitigation measure, that a deed restriction into perpetuity be placed over a portion of the city-owned land consisting of two parcels totaling approximately 10 acres. In addition to this requirement, the funding from the Department of Water Resources (DWR) required the creation of a conservation easement deeded into perpetuity over the same area of city-owned land. This staff report goes onto explain that in 2016 the City worked with the state to develop a specific deed restriction acceptable to the state, which was discussed at that City Council meeting. The state approved the Land Trust of Napa County (Land Trust) as the third-party easement holder. To avoid a duplication of efforts, both DWR and DFW mutually agreed upon a single conservation easement and the Land Trust as the conservation easement holder.

According to the staff report, during an on-site meeting with the Land Trust staff in 2016, the subject of the extension of Adams Street extension was discussed. The conservation easement would only permit the maintenance of existing infrastructure, flood control measures and habitat. It would prohibit the construction of a street, pedestrian path or bicycle lane on that portion of the City-owned property. The staff report concluded that Adams Street could not be extended to the Silverado Trail.

To ensure that there were no other alternatives available at that time (in 2016), City staff reached out to both DWR and DFW about the conflict between the 1993 General Plan (and the proposed GPU) regarding the extension of Adams St. DWR told the City staff that it would not approve a change to the conservation easement area or possible alternative mitigation to satisfy the requirements for the grant funds. This grant was scored and

awarded partially as a reflection of the proposed mitigation measures. If the conservation easement approved by the state in 2016 was not approved, then it is possible that the basis for the grant application approval would no longer be supported and all funds would have to be returned. In order to close out that grant it would be necessary to approve the road-restricted conservation easement and record it.

The staff report goes on to explain that if the City decided to return the grant money to the DWR, it would still be necessary to work with DFW before any consideration could be given to extending Adams Street. An alignment study would be necessary to satisfy the original Endangers Species Incidental Take Permit to look at what portion would be taken out of the conservation easement to make room for the street extension. After this is done the City would have to submit a request describing the proposed area to be removed from the deed restriction for the road. DFW would then review the proposal and, either recommend alternative-mitigation measures to satisfy the original permit or to deny it. The staff report concluded that if alternative mitigation measures were approved, they would be significantly more expensive and any alternative mitigation within the existing permit area would likely cause higher mitigation requirements on other projects when future permits are issued. If DFW denies the request, then there could be some significant financial consequences ($173,000) and the complete conservation easement would be required.

At the City Council meeting in May 2016 there was much discussion of the effect of the conservation easement discussed with DWR, DFW and the Land Trust on the extension of Adams Street to the Silverado Trail. The conclusion at the City Council meeting was clear, namely the approval of the conservation easement that the state was seeking would foreclose the extension of Adams Street to the Trail. The City Council approved the proposal.

Three months after the City Council approved the conservation easement that would foreclose the extension of Adams Street to the Silverado Trail, the Land Trust Board of Trustees approved the project on July 28, 2016 at their Board meeting.

Nearly two years after the City Council approved the conservation easement that would not allow the extension of Adams Street to the Silverado Trail, the issue again was raised at the March 13, 2018 City Council meeting. At

that meeting the Council approved a contract with 'the Land Trust of Napa County for a conservation easement as required by the terms of the Department of Water Resources grant contract No. 4600009016 for an amount not to exceed $65,000." The staff report explains that staff would work with both the Land Trust and DWR on the deed restriction. Nowhere in the staff report does it mention any of the following: (1) the prior City Council's approval on May 24, 2016 of a conservation easement, which would effectively restrict a roadway through the 10-acre site; (2) the prior conversations in 2016 on the conservation easement with both the Land Trust, DWR and DFW; and (3) the conservation easement into perpetuity requirement resulting from the granting of the Endangered Species Act Incidental Take Permit.

On October 23, 2018 (or two and a half years after the City Council approved the conservation easement, which effectively restricted the extension of Adams Street to the Trail), the City Council approved a second conservation easement giving the City the ability to approve a roadway through the 10-acre site required for a conservation easement. Once again, the staff report does not mention the May 24, 2016 City Council approval of a conservation easement effectively foreclosing the extension of Adams Street to the Trail, nor does it mention the Department of Fish and Wildlife's requirement for the very same restricted conservation easement because of the ITP granted to the City when it built the Flood Control Project. Also, of some importance, is the statement in the staff report that the City had been working with the Land Trust since March 2018, when, in fact, the staff had worked with the Trust well before May 2016. By not including the information about the prior City Council approval of the road-restricted conservation easement and the information about City's prior conversations with DWR, DFW and the Land Trust, it might call into question the appropriateness of the October 23, 2018 conservation easement approved by the Council. Both the City Council and the public were not furnished accurate or complete information before the Council took action.

It is unknown if the City has recorded any easement as required by the ITP and DWR grant. Also unknown is, whether or not, the second conservation easement approved by the City Council was prefaced by any conversation with any state agency confirming the change in the previously approved deed restriction concept. It is also unknown how the City closed out the DWR grant without proof of the conservation easement being passed and recorded, which was the key item preventing the grant close out. The

conservation easement was also the final item preventing the City from getting the final $237,000 for eligible project costs. If the grant has not been closed out, both DWR and DFW would have the ability to further audit the project, including the appropriate maintenance of the project and all required mitigation measures. A logical assumption is that the DWR grant has not been paid off because there has been no appropriation by the City Council for that amount of money.

If the City attempts to extend Adams Street to the Trail, it will again be necessary to get an Endangered Species Act Incidental Take Permit from DFW for that project. Unfortunately, this will put the City in the position of asking for approval of a new permit just after the City finished ignoring the mitigation measures agreed to by the City's in its prior ITP for the Flood Project. The likelihood of getting a second ITP would not be strong after ignoring the mitigation measures required in the first ITP.

It is also unclear what position DWR would take, if the City elects to extend Adams Street. Apparently, they were adamant they would not approve it the first time the City asked DWR about it in 2016. It has been nearly a decade since the flood control project was funded and completed and it is now approaching four years since the prior City staff conversations with both DWR and DFW on the issue of the conservation easement and the ability of the City to build a road through it. It probably would be prudent to acknowledge those prior conversation to both DWR and DFW in any of the City's current round of discussions. If the City doesn't do that and the state later finds out about those conversations, then the City may well jeopardize future grants or permits from these same agencies.

There is also another significant potential conservation easement issue. The DWR grant requires a conservation easement into perpetuity basically on any city-owned property on which DWR funds were used for the Flood Control Project. The only area the City originally determined to be included in any easement is 10-acre site of the city-owned land nearest the river. The expense payment reimbursement requests by the City to the DWR under the grant during the construction of the Flood Control Project, however, also appear to include costs used on the project's access road and pedestrian path. This area is also city-owned land and is not included in the 10-acre conservation easement. This is the city-owned property furthest from the river and which connects the access road and pedestrian path adjacent to the current terminus of Adams St to the original 10-acre conservation easement

site closest to the river. If that is correct, then the part of the project closest to the current Adams Street terminus would also have to be placed into the conservation easement into perpetuity in order to satisfy the grant agreement. Even a cursory look at some obvious items appearing on and/or making up the pedestrian path and the access road were itemized by the City as having been reimbursed under the DWR grant. This issue has been previously raised with the city a couple of times, but the staff has chosen to ignore it.

3. Shortly after Measure A was passed by the voters in 1998, St Helena began working on a Comprehensive Flood Control Project. In the original design was a levee, which cut the historic flood plain in half. The reason for the location of the levee became apparent, when the City proposed to combine the placement of the levee (to be paid for with Measure A funds) with an all-weather extension of Adams Street to the Silverado Trail, which was called the Adams Street Causeway and Bridge. Glossy brochures were produced by the City and distributed to residents in order to gather public support for the project that specific alignment of the levee to help provide a roadway.

   The 2004 EIR showed the Adams Street extension as a discretionary addition to the Flood Control Project (requiring a separate environmental review) using the levee as the primary vehicle to extend Adams Street to the Trail. On June 23, 2005 the Napa County Flood Protection and Conservation District notified St Helena that the Napa County Flood Protection and Watershed Improvement Authority had made inquiries regarding the levee because <u>any portion of the levee used for a component of a future transportation facility would thereby be ineligible to be constructed using Measure A funds</u>.

   As a result, Jonathon Goldman, the Director of Public Works and City Engineer for St Helena, wrote a letter to Robert J. Peterson, Napa County Flood Control and Water Conservation District Engineer, answering the question as to whether the levee is, in fact, intended to support a road rather than simply to provide flood protection. Goldman's July 12, 2005 letter says the "levee element serves two functions in the Project, (1) provide a barrier against inundation, and (2) provide an onsite location for disposition of soils to be removed from the planned terraces. The planned levee is wider than what would be necessary if only inundation-prevention were the objective. The levee is wider in order to accommodate the disposition of soils to be removed from the terraces. If the soils to be excavated were to be trucked to

offsite disposition, traffic and other potential impacts, as well as the cost of the Project, would increase."

The rest of Goldman's letter to Peterson goes on at great length to try to convince him that the real reason for the wider levee is the volume of soils to be replaced and not the placement of a road on the levee. Assuming that Goldman's information is correct, then there is no assurance that the levee can now sufficiently serve as the foundation for an all-weather road to the Trail, since the only requirement for the wider levee was not to support a transportation facility, but simply to provide a dumpsite for extra soil. Goldman makes clear the levee is wider than necessary to provide inundation-prevention only because it was needed as a dumpsite. The implication here is that the dumpsite was not engineered to support a roadway, because that would have foreclosed Measure A funding. To now claim that additional costs were, in fact, incurred to widen the levee to provide an appropriately engineered infrastructure for a roadway, could put our Measure A funding in jeopardy.

In the 2005 and 2006 Addendums to the 2004-approved EIR, any mention of the Adam Street extension was limited to the fact that it said there was no change from the 2004 EIR because the City was not considering approval of the Adams Street Causeway/Bridge and this issue required no further consideration or analysis.

After the 2005 and 2006 Addendums to the prior-approved 2004 Flood Control Project FEIR, no Flood Control funding applications, permits, etc. likely could go forward with an Adams Street extension to the Silverado Trail as part of it because there was no EIR done on that specific project.

4. Whether the extension of Adams Street is on, adjacent to or near the levee, the levee itself would not be benefited and likely the viability of the levee and Flood Control Project would be negatively impacted. The levee itself has not been maintained appropriately and the City has already told the County that the levee was not constructed in a manor to build a future road, but rather just a "dumping" point for excess soil removed from the project terraces. The levee operational and maintenance manual already requires that a gate be placed on the access to the levee to limit the use of cars on the levee. This only supports the concept that building a public road on the levee was not anticipated in the construction of the levee.

If the roadway is built alongside the levee, then any actual construction of the extended roadway and the bridge to the Trail and any ongoing use of the roadway would not be helpful in maintaining the viability of the levee. The safety and financial risks from a levee failure far outweigh any benefit from an extension of Adams Street to the Trail. Vineyard Valley and Hunts Grove residents are the most vulnerable of our population if the levee fails or its viability is threatened. If the levee fails, particularly because the City failed to maintain it adequately or because the City threatened the viability of it because of building a roadway on top of or adjacent to the levee, then the City would likely bare the financial liability for any damages resulting from the failure. The City assumed that liability once it accepted money from the State as explained in AB 1898 and CA Water Code §12748.3, which basically indemnified the state.

5. The St Helena Comprehensive Flood Control Project was a financial disaster for the City. Not only was the project way over the projected costs, but FEMA clawed-back $1.9M for disallowed expenses (such as the cost of crushing Merlot grapes in Mendocino County). DWR also required the repayment of $2.1M for disallowed expenses and double billing the same expenses to two different state funding sources. It is unclear if that repayment has been completed. As a result of the completely inadequate handling of the financial activities involved in the project, the City hired a forensic accountant. After months of review, the forensic accountant basically gave up. If the City decides to extend Adams St to the Silverado Trail, issues related to the repayment of grants, etc. will once again raise issues concerning the mishandling of the financial accounting of the monies spent on the project. The fact the City has not been able to close out a state grant on a project that was completed in 2010 will not help the City's case.

6. If the City elects to extend Adams Street to the Silverado Trail they will likely need the approval of both DWR and DFW for the reasons explained above. In addition, the City may also need the approval of the Napa County Flood Protection and Watershed Improvement Authority (Measure A authority) since the City previously said the design of the levee was not to facilitate a future transportation facility. Other approvals would possibly need to come from the Army Corp of Engineers, who approved its permit without information pertaining to a potential future roadway on or near the levee. The Army Corp of Engineers would also likely review the maintenance of the levee if their approval is necessary. FEMA, who approved funding for two grants based on flood control needs and then

approved the revised the flood zone after the project was built without any information pertinent to a roadway on or near the levee and its potential impact on the viability of the levee would also likely seek review.

Less problematic options for any additional access to the Silverado Trail from Highway 29 would be Mills Avenue to the south or Fulton Avenue just to the north of Adams Street. Neither of these options would run into any of the financial, administrative or safety problems that as Adams Street extension poses for the City.

FINAL

ENVIRONMENTAL IMPACT REPORT

for the

Hunter Subdivision Project

SCH no. 2018032014

Prepared for

City of St. Helena
Planning & Community Improvement Department
1572 Railroad Avenue
St. Helena, California 94574

Contact: Maya DeRosa,
Planning & Building Director
mderosa@cityofsthelena.org

Prepared by
DUDEK 1102 R Street
Sacramento, California 95811

OCTOBER 2022

Final Environmental Impact Report
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CHAPTER 1
INTRODUCTION

1.0 INTRODUCTION

This Final Environmental Impact Report (Final EIR) contains the agency and public comments received during the public review comment period for the Hunter Subdivision Project Draft EIR (Proposed Project).

The EIR is an informational document intended to disclose to the City of St. Helena (City), public agencies and the public the environmental consequences of approving and implementing the Proposed Project or one of the alternatives to the Project described in the Draft EIR. All written comments received during the public review period (September 23, 2021 through November 30, 2021[1]) on the Draft EIR are addressed in this Final EIR, as are oral comments received at the November 2 and November 30, 2021, Planning Commission hearings on the Draft EIR.

The responses in the Final EIR clarify, correct, and/or amplify text in the Draft EIR, as appropriate. Also included are text changes made at the initiative of the Lead Agency (City of St. Helena). These changes (summarized in Chapter 2) do not alter the conclusions of the Draft EIR. This document has been prepared in accordance with the California Environmental Quality Act (CEQA; California Public Resources Code (PRC), Sections 21000–21177).

1.1 BACKGROUND

In accordance with CEQA Guidelines Section 15082, the City released a Notice of Preparation (NOP) on March 6, 2018 through April 9, 2018, for the required 30-day review period. The purpose of the NOP was to provide notification that an EIR for the project was being prepared and to solicit guidance on the scope and content of the document. The Draft EIR was circulated for public review and comment for a period of 67 days[1] from September 23, 2021 through November 30, 2021. Public hearings before the City's Planning Commission to receive oral comments on the Draft EIR were held on November 2, 2021 and November 30, 2021.

The comments and responses that make up the Final EIR, in combination with the Draft EIR, as amended by the text changes, constitute the EIR that will be considered for certification by the decision makers of the City of St. Helena.

[1] In response to requests from the public to extend the comment period, the City extended the comment period an additional 22 days closing on November 30, 2021. The City also held another hearing to take oral comments at the November 30, 2021 Planning Commission hearing.

1.2 CEQA REQUIREMENTS

Under CEQA, the Lead Agency must prepare and certify a Final EIR prior to approving a proposed project. The contents of a Final EIR are specified in Section 15132 of the CEQA Guidelines, which states that the Final EIR shall consist of:

a) The Draft EIR or a revision of the Draft.

b) Comments and recommendations received on the Draft EIR either verbatim or in summary.

c) A list of persons, organizations, and public agencies commenting on the Draft EIR.

d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

e) Any other information added by the Lead Agency.

The Lead Agency must provide each agency that commented on the Draft EIR with a copy of the Lead Agency's response to comments a minimum of 10-days before certifying the Final EIR.

1.3 USE OF THE FINAL EIR

The Final EIR allows commenting agencies and the public and the City an opportunity to review revisions to the Draft EIR and the Responses to Comments received. The Final EIR serves as the environmental document to support approval of the Proposed Project, either in whole or in part, or one of the alternatives to the Project discussed in the Draft EIR.

As required by Section 15090 (a) (1)-(3) of the CEQA Guidelines, a Lead Agency, in certifying a Final EIR, must make the following three determinations:

1. The Final EIR has been completed in compliance with CEQA.
2. The Final EIR was presented to the decision-making body of the Lead Agency, and the decision-making body reviewed and considered the information in the Final EIR prior to approving the project.
3. The Final EIR reflects the Lead Agency's independent judgment and analysis.

As required by Section 15091 of the CEQA Guidelines, no public agency shall approve or carry out a project for which an EIR has been certified that identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings (Findings of Fact) for each of those significant effects, accompanied by a brief explanation of the rationale for each finding supported by substantial evidence in the record. The possible findings set forth in CEQA section 15091 are:

1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

Additionally, pursuant to Section 15093(b) of the CEQA Guidelines, when a Lead Agency approves a project that would result in significant unavoidable impacts that are disclosed in the Final EIR, the agency must state in writing the reasons supporting the action. The Statement of Overriding Considerations must be supported by substantial evidence in the Lead Agency's administrative record.

The Findings of Fact and Statement of Overriding Considerations are included in a separate document that will be considered for adoption by the City's decision makers at the time of Project review.

1.4 PROJECT UNDER REVIEW

The Proposed Project is located on a 16.9-acre site in the northeastern portion of the city, at the eastern terminus of Adams Street, three blocks east of downtown and State Route 29, and west of the Napa River. The Proposed Project consists of the following:

- A Tentative Subdivision Map to subdivide the site into 51 lots (sized for single-family residences), a 3.4-acre parcel, and two lettered lots: a 0.06-acre parcel (Parcel "A") for an onsite irrigation well and a 0.04-acre parcel (Parcel "B"), as shown in Figure 2-4, Proposed Tentative Map of the Draft EIR. The Project applicant has stated their intent to ultimately develop the 51 lots with 51 single-family, market-rate residences. Additionally, homes on 11 of the 51 lots would be developed with an ADU as part of their initial construction. The applicant intends to ultimately develop the 3.4-acre parcel with 25 attached multifamily residential units.
- An Affordable Housing Agreement, which would require approval by the City Council subsequent to approval of the Tentative Subdivision Map.
- Design Review of the proposed single-family and multi-family units.
- A Conditional Use Permit for the development of multi-family housing. Development of the Proposed Project includes the extension of Adams Street and Starr Avenue to and through the project site and the installation of infrastructure (water, sewer, etc.) to serve the proposed homes.

A detailed project description is contained in the Draft EIR in Chapter 2, Project Description. The environmental impact analysis is included in Chapter 3 of the Draft EIR.

1.5 SUMMARY OF TEXT CHANGES

Chapter 3 in this Final EIR, Changes to the Draft EIR, identifies all changes made to the document by section. These text changes provide additional clarity in response to comments received on the Draft EIR, but do not change the significance of the conclusions presented in the Draft EIR.

1.6 RESPONSES TO COMMENTS

A list of public agencies and individuals commenting on the Draft EIR is included in Chapter 2 in this Final EIR. A total of 122 written comment letters were received along with oral comments received at the public hearings held before the Planning Commission on November 2, 2021 and November 30, 2021. Responses to comments are provided in Chapter 4 of this Final EIR. Each comment letter and each oral comment on the Draft EIR, provided at the public hearings before the Planning Commission, is numbered and presented with brackets indicating how the letter or oral comment has been divided into individual comments. Each comment is given a binomial with the number of the comment letter appearing first, followed by the comment number. For example, comments in Letter 1 are numbered 1-1, 1-2, 1-3, and so on. Immediately following the letter or Planning Commission comments are responses, each numbered to correspond to the bracketed comments. Comments received at the Planning Commission hearings are numbered as PC-1, PC-2, etc. As the subject matter of one topic may overlap between letters, the reader must occasionally refer to one or more responses to review all the information on a given subject. To assist the reader, cross-references to other comments and also Master Responses are provided. A number of comments received raised the same or similar comments; therefore, Master Responses based on specific issues of concern are provided in Chapter 4.

1.7 MITIGATION MONITORING AND REPORTING PROGRAM

The Mitigation Monitoring and Reporting Program (MMRP) for the Proposed Project includes all of the mitigation measures required of the Project identified in the Draft EIR, as revised in Chapter 3 of this Final EIR. The MMRP is provided as a separate document.

If the City Council chooses to approve the Proposed Project or one of the alternatives described in the Draft EIR, the City Council will be required to adopt the MMRP at the same time it adopts its CEQA Findings, as required by Section 21081.6 of the Public Resources Code.

1.8 OVERVIEW OF THE PUBLIC PARTICIPATION AND REVIEW PROCESS

The City notified all responsible and trustee agencies and all known interested groups, organizations, and individuals that the Draft EIR was available for review. The following list of actions took place during the preparation, distribution, and review of the Draft EIR:

- The City filed a Notice of Completion (NOC) along with copies of the NOP stating the City's intention to prepare an EIR for the Proposed Project with the State Clearinghouse for the required 30-day public review period on March 6, 2018.
- A NOC and copies of the Draft EIR were filed with the State Clearinghouse on September 23, 2021 to start the required 45-day public review period (which was extended to 67 days). The City distributed a Notice of Availability (NOA) to interested groups, organizations, and individuals regarding the availability of the Draft EIR. A public notice was placed in the Napa Valley Register newspaper. A public hearing to take comments on the Draft EIR was held on November 2, 2021 and November 30, 2021.
- Copies of the Draft EIR were available for review on the City's website (https://www.cityofsthelena.org/planning/page/hunter-draft-eir); at the St. Helena library, and at the City's offices located at 1572 Railroad Avenue, St. Helena, CA 94574.

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CHAPTER 2
LIST OF AGENCIES/PERSONS COMMENTING

FEDERAL

There were no comments received from any federal agencies by the close of the comment review period (November 30, 2021).

STATE

There were no comments received from any state agencies by the close of the comment review period (November 30, 2021).

LOCAL

There were no comments received from any local agencies by the close of the comment review period (November 30, 2021).

ORGANIZATIONS

There were two comments received from local organizations; Napa Bicycle Coalition and Our Town St. Helena.

INDIVIDUALS

More than 120 comment letters were received from individuals and organizations.

Comments received from organizations and the public are listed in Table 2-1. Comments received from individuals are listed in alphabetical order. In some instances the same commenter submitted more than one letter. To differentiate between the letters, the date the letter was received is provided; however, there are numerous instances where letters from the same commenter are issued on the same day. The number of each letter reflects the order in which responses are provided in Chapter 4.

Table 2-1. List of Commenters

Letter Number	Commenter
Organizations	
1	Napa County Bicycle Coalition
2	Our Town St. Helena
Individuals	
3	Ron Amoroso (10/26/21)
4	Ron Amoroso (11/2/21)
5	Bette Antor

Table 2-1. List of Commenters

Letter Number	Commenter
6	Craig and Debra Austin
7	Katie and Jacob Avery
8	Trevor Barlow
9	Thomas and Margot Belt
10	Pierre Birebent
11	Earl and Trudy Bouligny
12	Karen and Kevin Bradley
13	Greg Brown
14	Ethan Brown
15	Andree Bryan
16	Bernerd Buckley (10/26/21)
17	Bernerd Buckley (10/26/21)
18	Bernerd Buckley (10/26/21)
19	Bernerd Buckley (11/2/21)
20	Bernerd Buckley (11/2/21)
21	Bernerd Buckley (11/29/21)
22	Jeff Burton
23	Lynda M. Burton
24	Calie Candia
25	Bert Casten
26	Deanna L. Caudill
27	Bob Childs and Nancy Carlson
28	Robb A. Cohen
29	Joseph Cole
30	Arlene and Richard Corsetti
31	Carroll and Ellen Cotten
32	Richard Crebs
33	Nicole and Scott Dale
34	Gayle Davies
35	Priscilla Dell
36	Nancy Dervin
37	Julie Dickson
38	Chris Echols
39	Cindy and John Ford
40	Chris Fowler
41	Pat Friday (11/8/21)

Table 2-1. List of Commenters

Letter Number	Commenter
42	Pat Friday (11/8/21)
43	Alan Galbraith
44	Dottie Gingerelli
45	Diane Green, Daniel Wheaton, Mark Arnett, Carl Barnes, Gary Oncina, James Pelligri (no date)
46	Diane Green, Daniel Wheaton, Mark Arnett, Carl Barnes, Gary Oncina, James Pelligri (11/2/21)
47	Diane Green, Daniel Wheaton, Mark Arnett, Carl Barnes, Gary Oncina, James Pelligri (11/2/21)
48	Elizabeth Green (11/3/21)
49	Elizabeth Green (11/5/21)
50	Rodney and Elizabeth Green (11/1/21)
51	Rodney and Elizabeth Green (11/3/21)
52	Gale Greisen
53	Henry Gundling (10/12/21)
54	Henry Gundling (10/12/21)
55	Kathleen Guneratne
56	Mariam Hansen
57	Donna Hardy
58	Carla Holm
59	Suzanne James
60	Frank and Tracy Jonelis
61	Sherri Kelly (10/27/21)
62	Sherri Kelly (11/3/21)
63	Patrick Kenealy
64	Susan Kenward
65	Grace D. Kistner (11/23/21)
66	Grace D. Kistner (11/29/21)
67	Pamela Koussa
68	Laurel Krsek
69	Gail Morgan Lane
70	Marina Lavagnino and Jenna Lavagnino
71	Lou Lavigne and Nancy Rothman
72	Sandra Lowry
73	Isobel Luria (11/2/21)
74	Isobel Luria (11/3/21)
75	Isobel Luria (11/8/21)

Table 2-1. List of Commenters

Letter Number	Commenter
76	Isobel Luria (11/30/21)
77	Norm Manzer
78	Beth and David Marks
79	Tracy McBride
80	Sandra McCorkle
81	Kathleen McCreedy
82	Joe McGrath
83	John Milliken (11/2/21)
84	John Milliken (11/30/21)
85	Michael Mills
86	Doris Mosler
87	Janell Myhre
88	Timothy Nieman
89	Indrajit Obeysekere
90	Gabriel and Tishna Pastrama
91	Joann Patton
92	Kathleen Paulus
93	Leslie R. Perry (11/1/21), Perry, Johnson, Anderson, Miller & Moskowitz
94	Leslie R. Perry (11/8/21), Perry, Johnson, Anderson, Miller & Moskowitz
95	Vivian Pirchner
96	Charles Pniower
97	Patrick and Laura Pohlen
98	Charlotte Powell
99	Lisa Redmon
100	Greg Reynolds
101	Ringenberg (via email, unsigned letter)
102	Jim Ritchie
103	Vivian L. Robison
104	Linda Rose
105	A. Venezia Rouas
106	Laurence Schlatter
107	John Schoof
108	Cathy Small
109	Patricia Stephens
110	Carolyn Troyan
111	Vineyard Valley Managing Partners (signed by residents)

Table 2-1. List of Commenters

Letter Number	Commenter
112	Vineyard Valley Residents
113	Maria Villegas (10/29/21)
114	Maria Villegas (11/29/21)
115	Maria Villegas (no date)
116	Lori Vrabel
117	Ree Whitford
118	Mark and Jeanette Willey
119	Connie Wilson
120	Terry Wood
121	Angela M. Zivkovic, PhD
Comment Letter Received after the Close of the Comment Period	
122	Daniel Hale

PLANNING COMMISSION HEARING – NOVEMBER 2, 2021 AND NOVEMBER 30, 2021

The transcript and responses to the November 2, 2021 and November 30, 2021 Planning Commission hearings are provided immediately following the comment letters and responses. There were a total of 12 speakers at the November 2, 2021 hearing and 6 speakers at the November 30, 2021 hearing. Table 2-2 lists all the commenters.

Table 2-2. List of Commenters – Planning Commission Hearings

Planning Commission Commenters – November 2, 2021
Angela Zivkovic
Greg Reynolds, Managing Partner Vineyard Valley
Maria Villegas
Patrick Band, Napa County Bicycle Coalition
Tracy McBride
Elizabeth Alderman
Nancy Dervin
Marina Lavagnino
Ben Alderman
Randy Hussong
Michael Mills
Maureen Levandowsky
Planning Commission Commenters – November 30, 2021
Tracy McBride
Marina Lavagnino
Anya Courtney
Greg Reynolds, Managing Partner Vineyard Valley
Jenna Lavagnino
Angela Zivkovic

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CHAPTER 3
CHANGES TO THE DRAFT EIR

INTRODUCTION

This chapter presents minor corrections, additions, and revisions made to the Draft EIR initiated by the Lead Agency (City of St. Helena), reviewing agencies, the public, and/or consultants based on their review. New text is indicated in underline and text to be deleted is reflected by ~~strike through~~, unless otherwise noted in the introduction preceding the text change. Text changes are presented in the section and page order in which they appear in the Draft EIR.

It should be noted that the changes represent minor clarifications/amplifications of the analysis contained in the Draft EIR and do not constitute significant new information that, in accordance with CEQA Guidelines Section 15088.5, would trigger the need to recirculate portions or all of the Draft EIR.

Executive Summary

The last sentence on page ES-17 is revised to read:

> Of the alternatives evaluated above, Alternative ~~2~~ 3, the Park/Open Space Preserve alternative is the environmentally superior alternative.

Chapter 1, Introduction

The text on page 1-6 is revised to read:

> **Alternative 3: Park/Open Space Preserve Alternative.** This alternative includes a 1-acre park that would preserve a majority of the on-site wetlands and would include the same number of units as the Proposed Project, including the affordable housing units and accessory dwelling units.

The text on page 1-7 under section 1.5 Organization of the Draft EIR is revised to read:

> ~~**Chapter 2,**~~ **Executive Summary—**Summarizes the elements of the Proposed Project and the environmental impacts that could result from implementation of the Proposed Project and provides a table that lists impacts, describes proposed mitigation measures, and indicates the level of significance of impacts before and after mitigation.

Section 3.3, Air Quality

The text in the last paragraph on page 3.3-2 is revised to read:

The greatest precipitation in the City occurs from ~~October~~ November to ~~April~~ March, during which time the rainfall averages 2~~–7~~ 5 inches per month. The average annual precipitation is ~~34.61~~26.09 inches. The City has a mild climate with an annual average temperature of ~~75~~63 degrees Fahrenheit (°F). The coolest months of the year are typically ~~December~~ November through February, with an annual average low of ~~36~~ 41°F. The warmest months are typically June through September, with an annual average high of ~~89~~ 90 °F. Prevailing wind direction in the ~~City~~ Project area (as measured at the ~~St. Helena~~ Napa station, approximately ~~0.42~~ 22 miles ~~southwest~~ southeast of the Project site) is from the west (~~WRCC 2016~~ NOAA 2022)[1].

Section 3.6, Geology and Soils

The third sentence of the first paragraph on page 3.6-12 is revised to read:

> The 1906 earthquake was of a substantial magnitude and the 1969 earthquake~~s were~~ was ~~of~~ a more moderate magnitude though with an earthquake epicenter~~s~~ located near downtown Santa Rosa."

Section 3.9, Hydrology and Water Quality

The fourth sentence of the last paragraph on page 4.9-7 is deleted:

> ~~During such a flood, the style of flooding onsite would be slow and gradual, since the high velocity flows remain limited to the regulatory floodway~~.

The first paragraph on page 3.9-12 is revised to read:

> Furthermore, in highly unlikely catastrophic situations (< a 0.5% annual chance) where the levee may be overtopped or in a 200+ year flood event, Proposed Project residents would have ample warning to evacuate prior to flooding. ~~Based on a comparison of the base flood elevation to proposed lot pad elevations, flooding of Proposed Project lots would range between 0 and 5 feet in depth, with the deepest flooding occurring on the northern part of the Project site. This level of flooding would leave upper floors or residences available for refuge. Because of this, the risks from a 200+ year flood and/or levee failure are limited to property damage rather than risk of life.~~ As previously indicated, this would be an impact of the pre-existing environment on the Proposed Project rather than the Proposed Project's impact on the environment.

The first sentence in the second paragraph on page 3.9-19 is revised to read:

[1] NOAA (National Oceanic and Atmospheric Administration). 2022. "NOWData: NOAA Online Weather Data." Accessed September 2022.https://www.weather.gov/wrh/Climate?wfo=mtr.

> Given the proximity and similar setting, groundwater levels are expected to be similar or possibly shallower beneath the Project site. According to the findings of the well capacity and sustainability report (Appendix L), the existing agricultural well on the Project site (proposed to be located in Parcel B on the tentative subdivision map) was constructed in 1976 to a depth of 410 feet bgs; with a current (2022) yield of 350 gallons per minute (gpm).

The second sentence in the last paragraph on page 3.9-43 is revised to read:

> Therefore, the proposed pumping from this well is ~~not~~ likely to have ~~any~~ a less direct effect on surface flow in the Napa River than if it directly pumped from the alluvial deposits.

Section 3.12, Public Services and Recreation

The last paragraph on page 3.12-5 is revised to read[2]:

> Additionally, an approximately 0.6 miles pedestrian path/trail is located parallel to the gravel levee maintenance road located adjacent to the northern boundary of the Project site, as shown in Figure 3.12-1. The levee maintenance road is not a City recreation trail but is used informally as a trail by local residents.

Section 3.13, Utilities and Service Systems

The last sentence in the third complete paragraph on page 3.13-2 is revised to read:

> It is assumed these vineyards have previously been irrigated by the on-site well, which constitutes the only water use on site at present. However, since the well is ~~currently~~ not currently in operation it is likely that ~~if~~ the vineyard is not currently receiving artificial irrigation.

The last paragraph on page 3.13-3 is revised to read:

> In total, the City is authorized to divert and store 1~~3~~,800 acre-feet from Bell Canyon Reservoir each year, and directly divert 1 cubic foot per second between November 15 and April 15 (150 days) of each year~~. Of the City's total authorized amount, 2,000 acre-feet can only be diverted and stored between November 15 and April 15 of each year~~ (City of St. Helena 2010).

The last sentence at the top of page 3.13-8 is revised to read:

> There is an existing well on the Project site that is presently not in operation (see Section 3.9, Hydrology and Water Quality for more information on the existing well and groundwater resources).

The second sentence of the last paragraph on page 3.13-8 is revised to read:

[2] Figure 3.12-1 is included at the end of this chapter.

> Water from the Bell Canyon Reservoir is treated by three licensed water treatment operators at the Louis Stralla Water Treatment Plant (WTP), located on Crystal Springs Road ~~in the~~ northeast~~ern part~~ of the City (City of St. Helena 2015a, 2019a).

The second sentence of page 3.13-26 is revised to read:

> This translates to a wastewater generation rate of ~~19.88 acre-feet per year, or 0.018 MGD~~ 14,000 gallons per day (0.014 MGD) during average dry weather flows (ADWF) and 23,400 gallons per day (0.0234 MGD) during peak wet weather flows (~~Appendix J~~ Carollo 2022).

The second sentence of the second paragraph on page 3.13-29 is revised to read:

> The Proposed Project is expected to generate approximately ~~0.018~~ 0.014 MGD of wastewater during ADWF and 0.0234 MGD during PWWF while in operation (Carollo 2022).

The third and fourth sentences of the fourth paragraph on page 3.13-32 are revised to read:

> The Proposed Project is expected to generate approximately ~~0.018~~ 0.014 MGD of wastewater during ADWF and 0.0234 MGD during PWWF (Carollo 2022). As the WWTP currently treats an average flow of 0.384 MGD, the additional ~~0.018~~ 0.014 MGD combined with the current average flow of 0.384 MGD would not exceed the plant's permitted allowable ADWF effluent limit of 0.5 MGD, as specified under its NPDES permit (City of St. Helena 2016).

The second sentence of the second paragraph on page 3.13-36 is revised to read:

> The Proposed Project would increase wastewater generation in the City by producing approximately ~~0.018~~ 0.014 MGD at buildout (Carollo 2022).

Section 3.13.6 References shall include the following additional reference:

> Carollo Engineers, Incorporated (Carollo), 2022. Hunter Subdivision Hydraulic Modeling Analysis, June 24, 2022.

Section 3.14, Transportation and Circulation

The last sentence in the second paragraph on page 3.14-13 is revised to read:

> Weekday service generally occurs every 45 minutes starting at 6:15 a.m. and ending at 10:45 p.m. Weekend service is provided every hour and is truncated during the morning and night periods. ~~Service is not provided on weekends or major holidays.~~

The first sentence in the fourth paragraph on page 3.14-13 is revised to read:

> The Napa Valley Wine Train also passes through the city; however, it is mainly used as a tourist attraction and not for commuting or passenger service ~~purposes~~. Stops are limited and occur on an irregular basis in the city.

Chapter 5, Alternatives

The title of Tables 5-2 and 5-3 on pages 5-10 and 5-11 are revised to read:

Table 5-2
Alternative 2: No Project/~~No Action~~ General Plan Alternative Projected Solid Waste Generation

Land Use	Generation Rate (tons/day/unit)	Waste Disposed (tons per day)
152 Single-family Residential Units	0.0033	0.502
	Total	**0.502**

Source: CalRecycle 2018.

Table 5-3
Alternative 2: No Project/~~No Action~~ General Plan Alternative Student Generation

Grades	Student Generation Rate (per total number of units)	Students Generated
K-2	0.058	8.816
3-5	0.080	12.16
6-8	0.088	13.38
9-12	0.088	15.84
	Total	**57**

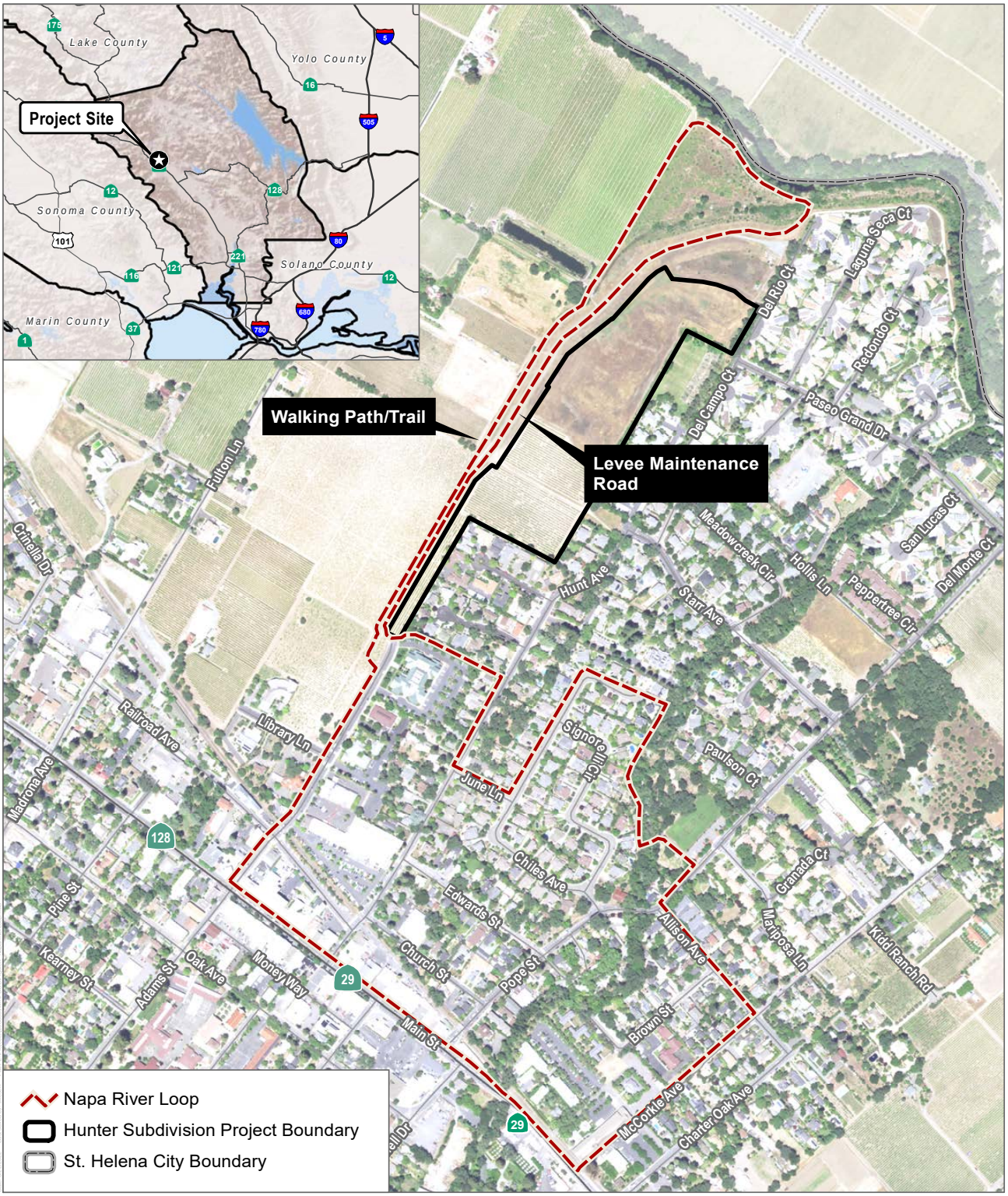
Source: SHUSD 2010.

The second sentence in the second paragraph on page 5-11 under the ability of the No Project/General Plan Alternative to meet the Project objectives is revised to read:

> However, this alternative ~~would~~ may not achieve the Proposed Project objective of developing a variety of housing types, including multifamily housing and ADUs. ~~Housing would be less affordable to a range of incomes since development would be limited to single-family homes.~~

Table 5-7 starting on page 5-29 is revised to read:

3.14-6: Under Cumulative conditions, would the Proposed Project increase hazards due to a geometric design feature or incompatible use? This is considered a less than significant impact.	LS	NI	LS~~SU~~	LS~~SU~~	LS~~SU~~



SOURCE: Napa County 2015, Bing 2022

DUDEK 0 305 610 Feet

FIGURE 3.12-1

Napa River Loop

Hunter Subdivision Project

CHAPTER 4
COMMENTS AND RESPONSES

This chapter contains the comment letters received in response to the Draft EIR during the public comment period (September 23 through November 30, 2021), as well as the transcripts from the November 2 and November 30, 2021, Planning Commission hearings on the Draft EIR. A list of all commenters is provided in Chapter 2. Each comment letter or Planning Commission comment is numbered, each comment is bracketed, and responses are provided to each comment. To assist the reader, a brief summary of the comment has been provided; however, it is only a summary and does not repeat the comment verbatim. Please refer back to the letter for the specific comment.

Master Responses have been provided to respond to the same or similar comments raised in numerous comment letters addressing the following issues:

- Emergency evacuation (Master Response 1),
- Availability of adequate water supply and compliance with the City's water neutral requirements (Master Response 2),
- Stability of the Napa River levee and flooding concerns (Master Response 3), and
- Adequacy of the City's wastewater conveyance capacity (Master Response 4) are provided on the following pages.

The responses amplify or clarify information provided in the Draft EIR and/or refer the reader to the appropriate place in the Draft EIR where the requested information can be found. Comments that are not directly related to environmental issues (e.g., opinions on the merits of the project unrelated to its environmental impacts) are noted for the record. Where text changes in the Draft EIR are warranted based on comments received, updated project information, or information provided by City of St. Helena staff, those changes are noted in the response to comment, and are listed in Chapter 3 of this Final EIR.

Any changes to the analysis contained in the Draft EIR represent only minor clarifications/ amplifications and do not constitute significant new information. In accordance with CEQA Guidelines, Section 15088.5, recirculation of the Draft EIR is not required.

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MASTER RESPONSE 1: EMERGENCY EVACUATION

Numerous comments were raised regarding emergency evacuation, specifically for residents of the adjacent Vineyard Valley Mobile Home Park (Vineyard Valley). Concerns included the addition of vehicles from the Proposed Project and the potential to hinder evacuation of residents in the area, including in the Vineyard Valley development during an emergency. Commentors asked whether this impact was considered and expressed concern about potential adverse impacts to public safety.

Roads that would provide emergency access near the Project site include Pope Street, Hunt Avenue, Starr Avenue, Adams Street, and Silverado Trail as well as the existing levee maintenance road that borders the northwest boundary of the Project site and the adjacent City detention basin. The Vineyard Valley development currently has only one access to enter/exit the development from Pope Street. Emergency access is provided via the maintenance road adjacent to the northern boundary.

On August 3, 2021, the St. Helena Police Department in conjunction with the St. Helena Fire Department conducted a practice emergency evacuation drill of Vineyard Valley residents. The emergency simulated a major incident, such as a fire, where the residents of Vineyard Valley would be asked to leave in a moment's notice in their vehicles. Residents evacuated in approximately 25 to 30 minutes. The attached “After Action Report,” dated Sept 20, 2021, provides additional detail on the evacuation drill.

Based on the results of the evacuation drill, the St. Helena Police Department has concluded that any additional traffic from the Proposed Project would not significantly impact the ability of Vineyard Valley residents to safely evacuate the development in the event of an emergency. The Police Department also concluded that the proposed extension of Starr Avenue to Adams Street will help facilitate future evacuations by providing additional roadway capacity and additional routing options for emergency traffic (J.Tharp September 2021)[1]. If, for some reason, the levee maintenance road is closed residents of Vineyard Valley would exit using the access onto Pope Street.

Another concern with regard to the Proposed Project’s potential impact on emergency evaluation concerned construction activities and their potential to block access to the levee maintenance road in the event of an emergency. Construction equipment would be staged on the Project site and would not be allowed to to park or be stored on or block access to the maintenance road. Access to the maintenance road would be maintained during all construction activities, even during construction of the extension of Adams Street, to ensure adequate emergency access would be available. All construction trucks and equipment would access the site from either Starr Avenue or Adams Street. No construction vehicles would be permitted on the levee maintenance road.

Emergency access and public safety is evaluated in the Draft EIR in Sections 3.8, Hazards and Hazardous Materials, 3.12, Public Services and Recreation and 3.14, Transportation and

[1] City of St. Helena Police Department, After Action Report, Lt. Justin Tharp, September 20, 2021.

Circulation. The St. Helena Fire Department has reviewed the proposed Tentative Subdivision Map and has not identified any issues with the Project's proposed emergency access.

As discussed in Section 3.8, Hazards and Hazardous Materials, Napa County, in coordination with other jurisdictions including the City, has prepared a Draft 2020 Multi-Jurisdictional Hazard Mitigation Plan Update, which has not yet been adopted (DEIR p. 3.8-11). The plan covers each of the major natural hazards that pose risks to County infrastructure and residents and includes:

- Focusing resources on the greatest risks and vulnerabilities,
- Building partnerships by involving citizens, organizations, and businesses,
- Increasing education and awareness of threats and hazards, as well as their risks,
- Communicating priorities to state and federal officials, and
- Aligning risk reduction with other community objectives.

The potential for the Project to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan is evaluated under Impact 3.8-3 on page 3.8-20 of the Draft EIR. As noted in the discussion, the Project includes three points of access -- the extension of Starr Avenue, Adams Street, and emergency vehicle access via the levee maintenance road-- to facilitate the ingress and egress of emergency response vehicles, including the City and County Fire Department's apparatus, Project residents, and Vineyard Valley residents. The emergency vehicle access onto the maintenance road would be designed with bollards or a fence that would be kept locked. In the event of an emergency requiring evacuation, police or fire personnel/vehicles would have access to remove the bollards/unlock the gate through a locked box (e.g., knox box) to enable access to the site and as a third egress option for Project residents to evacuate. The Project has been designed to ensure all streets and roads are adequate in terms of width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide multiple points of emergency ingress and egress to ensure a safe evacuation in the event of an emergency.

The ability of the City's police and fire services to protect future Project homes and residents is addressed in Section 3.12, Public Services and Recreation. As discussed, the Project site would be served by the City's police and fire departments located at 1480 Main Street, approximately 0.2 miles from the site. Development of the Project site would increase the demand for fire protection and emergency services; however, as discussed on page 3.12-14, the Project is required to comply with Chapter 15.36 of the City's Municipal Code and the State Building Code, which requires installation of approved automatic sprinkler systems in all single-family and multi-family buildings. The Project would be developed consistent with 1993 General Plan Policy 8.5.6 and 2019 General Plan Policy PS4.D, which requires new development to meet the minimum fire flow rates specified by the City's Fire Code. In addition, as mentioned above all streets and roads are designed to be adequate in terms of width, turning radius, and grade to facilitate access by City firefighting apparatus, and to provide emergency ingress and egress. The site and construction plans for the proposed single family homes and the multi-family development on Lot 52 would be subject to plan review by the City's Fire Department to ensure proper access for fire and emergency response is provided and required fire suppression features are included.

Section 3.14, Transportation and Circulation also addresses adequate emergency access under Impact 3.14-4 on page 3.14-51. The analysis reiterates what has previously been mentioned: the Project includes two primary access points, Starr Avenue and Adams Street as well as a

separate emergency vehicle access. In the event of an emergency there would be three roadways that would enable vehicles to safely enter/exit the Project site and all streets and roads would be designed to facilitate access by City firefighting apparatus, and to provide alternative emergency ingress and egress.

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MASTER RESPONSE 2: ST. HELENA WATER SUPPLY AND WATER NEUTRAL POLICY FOR DEVELOPMENT

Numerous commenters have questioned the ability of the City of St. Helena (City) to meet the water demands of the Hunter Subdivision project (Proposed Project or Project), the viability of relying on the City's Water Neutral Policy, how the effects of climate change and current drought conditions are considered, and whether implications of the outcome of the City's Water Audit lawsuit should be included in the analysis. The following responds to these concerns.

Water Demand

The Draft EIR addresses the City's water supply and availability in Section 3.13, Utilities and Service Systems. The City currently sources its water supply from Bell Canyon Reservoir, extracted groundwater from the Stonebridge Well Complex, and water purchased from the City of Napa (DEIR pp. 3.13-2 and 3). Bell Canyon Reservoir has a physical storage capacity of 2,400 acre-feet (AF) with a safe yield estimated at between 500-1,100 AF. Existing water rights permit the City to divert up to 1,800 AF between November 15 and April 15 of each year. The City owns and operates two active groundwater wells, collectively known as the Stonebridge Well Complex, that have a combined capacity of approximately 595 gallons per minute (gpm). These wells have the potential to provide 960 acre-feet of potable water per year if both are operated continuously (DEIR p. 3.13-7). However, the City limits groundwater production to a long-term average not to exceed 450 AF per year. As stated on page 3.9-19 of the Draft EIR, groundwater pumping at these two wells has averaged 350 AFY between 2006 and 2019, with a range of 182 acre-feet in 2012 to a high of 526 acre-feet in 2013. This period captures multi-year drought conditions and according to monitoring data of a groundwater monitoring well located approximately 600 feet from the Project site, the groundwater level trend has been stable through this period (DEIR p. 3.9-42).

The City of Napa is contracted to provide the City with a minimum of 600 AF of water with an option for an additional 200 AF when feasible (DEIR p. 4.13-4). In the 2019 watershed report for Bell Canyon, the reservoir provided 43.6% of the City's water supply, the City of Napa supplied 42.5%, and the Stonebridge Wells the remaining 13.8% in 2018. However, the share of water from each source can change from year to year as the three sources of water supply allow for flexibility in order to adapt to changing conditions.

As shown in Table 3.13-1 on page 3.13-3 of the Draft EIR, the City's water deliveries have varied from year to year but overall have shown a decreasing trend from 1,882 AF in 2013 to 1,629 AF in 2020. The City's Safe Yield Committee determined that the potable water system can provide a total supply of up to 1,950 AF per year as a sustainable rate on a long-term basis (DEIR p. 3.13-11). This safe yield value recognizes that drought periods will be experienced and that circumstances may require the implementation of water restrictions (Phase III) during a dry year, but that these restrictions do not represent "undue hardships" (St. Helena Municipal Code Title 13 - Public Services, Chapter 13.04 Water Service System, Article 2 Water Shortage Emergencies, Drought and Water Conservation*)*. The Committee considered "undue hardship" to be Phase IV or V restrictions, or three or more consecutive months of Phase III restrictions. The domestic water demand for the Project at 19.88 AF per year is based on the Water Neutral Report prepared for the Project (Appendix J). The Water Neutral Report also estimates

outdoor/landscaping uses, which would be served by the onsite agricultural well and is therefore separate from the analysis of domestic water use.

The Water Neutral Report conservatively assumes the Proposed Project will include eight persons per single family residence which is much higher than the City's average of 2.45 persons per household (DEIR p. 3.13-24),[2] and therefore likely overstates actual water use. However, assuming this conservative estimate of 19.88 AF of domestic water use per year, the additional demand of the Project in combination with the recent total deliveries (1,629 + 19.88 = 1,648.88 AF) would still be far below the City's adopted safe yield of 1,950. Therefore, the new water demand associated with the Proposed Project could be met by the City's potable water system even without the water offset requirements of the City's Water Neutral Policy, as discussed further below.

Water Neutral Policy

The City's Water Neutral Policy included in Chapter 13.12, Water Use and Efficiency, of the Municipal Code requires that new development be water-neutral (from the City-delivered water system) through any combination of on-site water conservation measures and/or off-site retrofitting and/or use of well water (DEIR p. 3.13-21). For the Proposed Project, there are no opportunities for on-site water conservation since the site has no current water demand. Therefore, the Project must demonstrate water neutrality through off-site retrofitting and system improvements which must be demonstrated in a quantitative water analysis of the Project.

Per Municipal Code Section 13.12.050, the developer is responsible for identifying residential or nonresidential properties eligible for retrofitting and verify to the Department of Public Works that the required number of retrofits have been completed prior to the issuance of a certificate of occupancy. Appendix J of the Draft EIR includes the quantitative water analysis completed for the Project as required by the Water Neutral Policy. The report concluded that the offset of the Project water demands could be met through financial assistance with existing system improvements (e.g., payment of required fee) commensurate with the cost of retrofitting existing residences with low flow fixtures, but also includes a variety of suggested methods to increase domestic water supply or reduce demand to offset the Project's domestic water use.

As detailed in the Water Neutral Policy, the water demand of the Project would equate to retrofitting 333 residences with water conservation fixtures, but this is not to say that the policy can only be met through residential retrofits. For example, the Water Neutral Report referenced the potential for assisting the City in repairs to the transmission line between the City and Rutherford where a substantial amount of water is lost due to the current condition of the old pipeline. Reducing water losses is a gain for the supply system.

As part of the Project's proposed Conditions of Approval it states that no building permits may be issued until the developer has identified and implemented offsite improvements that reduce water loss from the public water distribution system and/or identify and implement offsite improvements that result in a net increase in potable water availability equivalent to 19.8 AFY,

[2] Exterior water demand (landscape irrigation, etc.) would be met by an onsite well and is not included in this estimate, which includes interior domestic uses only.

or a combination of these. Therefore, with adherence to this regulatory requirement and the required Conditions of Approval, occupancy of the Proposed Project would not occur until the City's Public Works Department has verified completion of these retrofits or system improvements that meet the City's construction standards to offset the Project's new water demand. As a result, the City would be able to meet the Project's water supply demand and result in a less-than-significant impact.

Climate Change

One of the effects of global climate change is an increase in variabilities of weather patterns and an increased probability to experience periods of drought. While climate change can create drier years in which precipitation is below annual averages, it can also result in very wet years.

The City recognizes that future periods of drought conditions are likely and may become more frequent. The establishment of the safe yield of 1,950 AF per year completed by the City's Safe Yield Committee provides the parameters for long term management of water supply resources. As discussed above, the new water demands for the Proposed Project would be offset through adherence to the City's Water Neutral Policy where retrofits or system improvements equivalent to the proposed new demands would be in place prior to issuance of building permits for development of the Project.

However, as mentioned above, the City may still be forced to enact water conservation and/or water rationing requirements during drought periods because of strains on the system that would be due to the effects of climate change. The City's Municipal Code (Title 13 - Public Services, Chapter 13.04 Water Service System, Article 2 Water Shortage Emergencies, Drought and Water Conservation) establishes the thresholds and requirements for water emergency phases, water conservation, and regulations that can adapt to changing conditions and enact emergency requirements for users as appropriate for long term water supply planning.

Therefore, the Draft EIR does consider the effects of climate change in Project impacts related to water supplies. The EIR determines that the Project can be adequately served based on existing water supplies. Compliance with the City's Water Neutral Policy would further ensure that the Project does not adversely effect the City's future water supplies.

Water Audit Lawsuit

Several comments have referenced the Water Audit lawsuit and have suggested that the outcome of that lawsuit should be considered as part of the analysis of water supply and hydrologic resources related to the Project. The lawsuit claims the City has violated its public trust in its management of water resources. The plaintiffs seek to increase monitoring and oversight of groundwater and surface water resources. The lawsuit claims poor documentation of water uses, including pumping at the City's Stonebridge Well Complex, and water deliveries to vineyards, wineries, and the Meadowood resort.

The Water Audit's complaint does not ask for changes to existing water uses. Instead, it seeks an injunction to stop the City from issuing new groundwater well drilling permits until enough

information is available to make informed water allocation decisions. The Proposed Project does not include a requirement for a new groundwater well drilling permit and so a potential injunction on new well drilling permits would not affect the Project.

As discussed on page 3.9-15 of the Draft EIR, there is an inactive groundwater well located in the northern portion of the Project site that may have been historically used to provide construction water for the City's Flood Protection Project and was used in the past for agricultural irrigation. The Project proposes to use this well for the irrigation of public and private landscaping and all other outdoor uses, which are estimated to require 17.16 AF per year (DEIR p. 3.13-32).

Regarding concerns about hydraulic conductivity with the adjacent Napa River, a site-specific well capacity and sustainability report was prepared that included conducting a 24-hour pump test as part of evaluating the hydrogeologic characteristics of the existing on-site well (Appendix L of the Draft EIR). The pump test ran at a rate of 40 gpm, which was nearly four times as high as the proposed rate for the Project (10.6 gpm). The study concluded that the onsite well draws from an aquifer with high transmissivity (i.e., ability of the water bearing unit to transmit water flow) and that the proposed pumping would not likely adversely affect either local water levels or Napa River flows. The onsite well is screened from 80 feet below ground surface (bgs) to 410 feet bgs, which is within the deeper volcanic aquifer and below the Napa Valley alluvium (the shallow water bearing unit that is considered hydraulically connected to the Napa River).

Therefore, whereas the Water Audit lawsuit is primarily concerned with the management of water resources that would affect the water levels of the Napa River, the well capacity and sustainability report determined that the pumping of the onsite well to supply the Project's public and private landscaping would not adversely affect flows in the Napa River. The analysis under Impact 3.9-2 starting on page 3.9-40 of the Draft EIR provides a detailed analysis of potential impacts associated with using the on-site well.

Considering that the Project does not require obtaining a well drilling permit and that a site-specific hydrogeologic study has demonstrated that the Project would not adversely affect water levels, the outcome of the Water Audit lawsuit would not alter the findings of the Draft EIR.

CEQA requires that the determination of significant effects be based on substantial evidence that include facts, reasonable assumptions predicated upon facts, expert opinion supported by facts, and not speculation (CEQA Guidelines § 21082.2). Therefore, the final outcome of the Water Audit lawsuit may have ramifications for the City in its long-term management of water resources but would not affect the analysis or impact significance determinations that were made in the Draft EIR.

MASTER RESPONSE 3: NAPA RIVER FLOOD PROTECTION/LEVEE

The Hunter Subdivision Project (Project or Proposed Project) was in the past in a flood zone but is now protected from a 200-year flood event (equivalent to less than a 0.5% annual chance) by the St. Helena Comprehensive Flood Protection Project (Flood Protection Project). The Project does not have an impact on the Flood Protection Project's effectiveness or on flood hazards for surrounding communities, either directly or indirectly.

Many commenters have raised concerns that the Project would put people and property at unreasonable risk if a major flood event overtops the levee[3] (i.e., greater than 200-year flood) and/or if the levee fails. These concerns generally revolve around the Project's perceived physical impacts on the levee; the levee's current condition, inspections, and maintenance; a perception that the project would increase existing flood risks for neighboring communities (e.g., Vineyard Valley and Hunt's Grove); confusion over levee certification/accreditation; and legal, liability, and insurance questions.

Comments that raised concerns about growth inducement (due to the levee reducing SFHAs in the City) are comments on the Flood Protection Project, not the Project.

As a general matter, the bulk of the comments received do not question the accuracy of the information contained in the Draft EIR or the adequacy of the analysis presented. Rather, they express differing opinions about levels of acceptable risk and a lack of trust in the design, construction, and maintenance of the Flood Protection Project. The Draft EIR includes a detailed description of the flood hazards present; the engineering, design, and maintenance of the Flood Protection Project; and the City's emergency management procedures in Section 3.9, Hydrology and Water Quality (Draft EIR pp. 3.9-6 through 3.9-13). This information was provided for reference purposes and addresses a majority of the comments received that relate to flooding and levee protection. The reason this information was included in the Environmental Setting section of Section 3.9 (Hydrology and Water Quality), rather than being addressed as an impact, is because impacts of the environment on a project or plan (as opposed to impacts of a project or plan on the environment) are beyond the scope of required CEQA review.[4]

Flood Risks

The Project does not have an impact on the levee's effectiveness or on flood hazards for surrounding communities, either directly or indirectly. California Supreme Court's decision in *California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369* held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents" but they must analyze hazards the project might risk exacerbating. For example, if a project proposes development on a site with existing subsurface hazards, then grading/development of the project may exacerbate the risk of those existing subsurface hazards.

[3] Note that references to the levee are inclusive of the floodwall component of the Flood Protection Project.

[4] "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (Ballona Wetlands Land Trust v. City of Los Angeles (2011) 201 Cal.App.4th 455, 473.)

Accordingly, the State Office of Planning and Research's 2018 revisions to the CEQA Guidelines—which the City uses as its CEQA thresholds of significance—removed reference to property damage, personal injury, or loss of life due to flooding or levee failure (i.e., pre-existing hazards) from Appendix G (included in the CEQA Guidelines).

Placement of the Project within an area protected from the 200-year flood does not substantially increase public exposure to flood risk, even though the risk is not zero. The Draft EIR acknowledges that there is residual risk to residents which is why the Federal Emergency Management Agency or FEMA encourages the purchase of optional flood insurance (i.e., FEMA preferred risk policy) (Draft EIR p. 3.9-8, first paragraph). The Project's Conditions of Approval require that prior to issuance of building permits, all future occupants will be provided information which describes the flood risk and notifies the buyer of the availability of low-cost Preferred Risk Policy flood insurance. Comments that address legal, liability, and/or insurance issues fall outside the scope of CEQA review, because they are not related to impacts of the project on the environment.

It is not the role of the Draft EIR to guarantee that there would be zero risk to life or property in the event of an extreme (i.e., greater than 200-year) or catastrophic flood event. The level of risk to the Project and its residents is reasonably and acceptably low due to the 200-year level of protection afforded by the Flood Protection Project. The description of flood emergency stages, preparedness, and response (Draft EIR pp. 3.9-11 and 3.9-12) remains accurate and indicates a reasonable plan for alerting and protecting residents from major flood events.

In the last paragraph on page 3.9-7, the Draft EIR speculates as to the style of flooding that would occur in the Project site based on its position outside of the regulatory floodway, if there were a levee overtopping event. The style of flooding would be dependent on the location, speed of water level rise, and levee response to an overtopping event. No portion of the Project site is located within the FEMA regulatory floodway. Therefore, the text on page 3.9-7 is revised to remove the reference to flooding being "slow and gradual." Please see Chapter 3, Changes to the Draft EIR for the revised text.

For the same reasons, the text on page 3.9-12 is also revised to remove the characterization of what could happen in the event of a flood. As previously indicated, this would be an impact of the pre-existing environment on the Proposed Project rather than the Proposed Project's impact on the environment. Please see Chapter 3, Changes to the Draft EIR for the revised text.

Clarification on Terminology/Concepts

Many commenters have expressed concern about the levee's design and construction, because it was not designed and built by the Army Corps of Engineers (ACOE) and is maintained by the City. As noted above, the Project does not have an impact on the levee's effectiveness or on flood hazards for surrounding communities, either directly or indirectly. California Supreme Court's decision in *California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369* held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents" but they must analyze hazards the project might risk exacerbating. Accordingly, comments

regarding existing structures, such as the levee, that will not be directly or indirectly impacted the Project, are outside the scope of CEQA review for this Project.

However, for strictly informational purposes the City provides the following: there are numerous non-federal levees throughout the United States that are safely built and maintained by local and/or state entities. The City of St. Helena Department of Public Works oversees inspection, maintenance and repairs of the levee, and has confirmed that the levee was designed and built by qualified contractors in accordance with ACOE engineering and safety standards (Draft EIR p. 3.9-8).

Levee certification is the process that deals specifically with the design and physical condition of the levee and is the responsibility of the levee owner or community in charge of the levee's operations and maintenance. Certification must be completed for the levee to be eligible for accreditation by FEMA. Certification consists of documentation, signed and sealed by a registered Professional Engineer, as defined in Chapter 44 of the Code of Federal Regulations (44 CFR), Section 65.2. By virtue of FEMA's approval of the City's application for a Letter of Map Revision (LOMR) and subsequent revision of the Flood Insurance Rate Map (FIRM), the levee is a FEMA-accredited levee system[5] that has undergone the certification process. While FEMA does not design, build, maintain, inspect, or certify levees, it uses the best available data about flood hazards and levee conditions to create FIRMs and Flood Risk Products (FRPs). These FIRMs and FRPs are tools that provide a more precise, up-to-date picture of the flood hazards facing levee-impacted areas, which is important given that the flood risks change over time.

The modern construction of the levee makes it more secure than other accredited levee systems that may have received accreditation decades ago, and the 200-year level of protection provides substantial additional protection against flooding that takes into consideration increased rainfall and runoff due to climate change.

Levee Condition and Maintenance/Inspections and City Detention Basin

Several concerns were raised that the levee has not been properly maintained and may be subject to reduced performance due to animal burrows, erosion, and/or pump malfunctions. As discussed below, these issues are outside the scope of CEQA review of the Project, because the Project does not physically infringe upon or otherwise affect the levee. (See *California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369.)*

However, for strictly informational purposes, the City provides the following: the City employs qualified individuals to inspect the levee on a monthly basis to detect any potential issues and take action on them as they arise. For example, in the past issues were found with the operation/startup of the detention basin's pump and it will be repaired by a qualified contractor. Further, it is up to the professional judgement of the City's engineer as to when any animal burrows may compromise the levee's safety. Per the inspection reports, the City has an animal

[5] A FEMA-Accredited Levee System is levee system that FEMA has shown on a FIRM that is recognized as reducing the flood hazards posed by a 1-percent-annual-chance flood. This determination is based on the submittal of data and documentation as required by 44CFR§65.10 of the NFIP regulations. The area landward of an accredited levee system is shown as Zone X (shaded) on the FIRM except for areas of residual flooding, such as ponding areas, which are shown as Special Flood Hazard Area (SFHA).

burrow control program in place and conducts burrow control activities as needed. The City also makes its levee inspection reports and summary reports available online here: https://www.cityofsthelena.org/publicworks/page/flood-control-and-river-restoration-project.

Several commenters referred to erosion or runoff from the Project affecting the City's detention basin. These commenters are referred to Draft EIR pages 3.9-44 and 3.9-45, which explains that the detention basin was designed assuming the Project would consist of 70% impervious (developed) area, when in fact it would consist of about 58% impervious area. The estimate of the Project's impervious surface coverage was calculated based on design drawings of the Project. Accordingly, as discussed in the Draft EIR on page 3.9-45, the Project would not contribute increase flows or erosion to off-site properties because the detention basin has been adequately sized and designed.

Commenters also requested information on what funds were used to construct the levee (Flood Control Project), what funds the City uses for repair and maintenance of the levee, what funds would be available to repair homes in the event of a levee breach, would the City be held liable in the event of a levee breach, and is the City non-compliant with the terms of Measure A.[6] Concerns regarding the financing of the levee, ongoing repairs and maintenance, financing to address damages in the event of a catastrophic flood, and liability are outside the scope of CEQA review, because they are not related to impacts of the project on the environment. In addition, economic effects of a project are not considered significant effects on the environment unless the economic changes are connected to physical environmental effects (CEQA Guidelines Section 15131(a)).

Regarding the comment suggesting that the City could be non-compliant with the County's Measure A ordinance, it is assumed the commenter is referencing subsection G, which states "none of the projects are intended or designed to encourage population growth in the County." To clarify, the Project site has been designated and zoned for residential development since the City's 1975 General Plan. The City's Flood Protection Project was designed consistent with the intent of Measure A to provide flood protection to residents and businesses in the County. Development of this site with residential uses would not be considered encouraging new population growth in the City because this site has been planned for future development for over 45 years.

[6] Measure A is an ordinance of the Napa County Flood Protection and Watershed Improvement Authority that adopted by Napa County residents in 1998. It is used to finance the Napa River Flood Protection Project. Each City and Town in Napa County receives a portion of Measure A revenues to fund flood protection projects. Subsection G states "none of the projects are intended or designed to encourage population growth in the County."

MASTER RESPONSE 4: WASTEWATER CONVEYANCE CAPACITY

Numerous commenters raised concerns that the additional wastewater flows from the Hunter Subdivision project (Proposed Project or Project) would significantly exacerbate an existing capacity issue in the vicinity of the Vineyard Valley Mobile Home Park. The concerns include the issue of potential increased backflow incidents that affect the Vineyard Valley mobile home community. Commenters also questioned the assumptions that were used to estimate the flows that would originate from the Project, which they assert underestimate the wastewater flows that would occur with the Project. Capacity of the City's wastewater infrastructure to accommodate the Project was another concern raised in numerous comment letters. The following responds to these concerns.

Wastewater Flow Assessment

The Draft EIR addresses the Project's wastewater flows in Section 3.13, Utilities and Service Systems. To support the findings of the Draft EIR, a hydraulic modeling analysis was recently conducted by Carollo Engineers who prepared the citywide Integrated Utility Master Plan (Carollo 2022). As part of their work for the Master Plan, Carollo had constructed a hydraulic model of the entire wastewater collection system for the City. The purpose of the model was to identify capacity deficiencies within the collection system under both average dry weather flows (ADWF) and peak wet weather flow (PWWF) conditions.

To identify the potential effects of the Project, the model was updated by adding the wastewater loads that would be coming from the Project to the point of connection to the sewer system, which is at the intersection of Del Rio Court and Paseo Grand Drive, upstream of the Vineyard Valley Mobile Home Park. The evaluation criteria for the Project specific analysis was the same used for the Master Plan analysis and included conservative assumptions on surcharge depth[7], maximum flow depth, and peak dry weather flow conditions (i.e., no surcharging is allowed). A copy of the memorandum prepared by Carollo is included as Appendix A to this Final EIR.

For the Proposed Project, the estimated ADWF flows would be 14,000 gallons per day (gpd) (Carollo 2022). The ADWF flows are calculated by multiplying the projected increase in residential units by the residential density of 2.45 persons per household and multiplying the result by the per capita flowrate of 66 gallons per capita per day, consistent with standards used for the citywide Master Plan. The Project's PWWF flows were also calculated based on methods used for the Master Plan and were estimated at 23,400 gpd (Carollo 2022).

The findings of the hydraulic analysis determined that under existing conditions, there is sufficient capacity within the existing sewer system for all ADWF flows. However, under PWWF conditions, there is an existing deficiency upstream of what would be the Project's point of connection that is creating a bottleneck. This bottleneck was identified in the Master Plan as a future upgrade project (Project WWGM-6) that would replace approximately 450 feet of 15-inch and 18-inch diameter pipelines along Del Campo Court, between Hunt Avenue and Paseo

[7] Sewers are surcharged when the supply of water to be carried is greater than the capacity of the pipes to carry the flow. The surface of the wastewater in manholes rises above the top of the sewer pipe, and the sewer is under pressure or a head, rather than at atmospheric pressure.

Grand drive with a 21-inch diameter pipe. In addition, 910 feet of 18-inch diameter pipeline along Paseo Drive, between Del Campo Court and Los Robles Court, would also be upgraded to a 21-inch diameter pipeline under Project WWGM-6.

With the additional wastewater flows that would be attributed to the Proposed Project (14,000 gpd), the hydraulic modeling still shows that under ADWF there would be sufficient capacity within the existing sewer system. Under PWWF conditions, there are deficiencies in the capacity of the system, however the addition of the Project flows (23,400 gpd) did not identify any additional deficiencies that are not already present downstream of the Project site (Carollo 2022). The Project's contribution represents only 0.5% of the PWWF flows, which is not considered to substantively exacerbate this existing deficiency (Carollo 2022).

Once the proposed Master Plan improvements are completed, and the upsizing of the pipes between Hunt Avenue and Los Robles Court is completed, there would be adequate capacity for both PWWF including flows from the Project (Carollo 2022). The hydraulic analysis verified that the recommended improvements provided in the Master Plan would still be valid and appropriate as stated in the plan.

Therefore, according to the hydraulic modeling which is consistent with the modeling being used for the citywide Master Plan, there is adequate capacity for the Project's ADWF under existing conditions. During PWWF, the Project would not create any new deficiencies and would represent only a very small portion (0.5%) of total flows.

The City's Master Plan already identifies existing deficiencies and have targeted projects like WWGM-6, which would upsize segments of the system, to alleviate current constraints such that the impacts would be considered less than significant, consistent with the findings of the Draft EIR.

Wastewater Flow Estimates

As noted above, according to the recent hydraulic analysis of projected wastewater flows from the Proposed Project prepared by Carollo Engineers (see Appendix A to this Final EIR), the Project is estimated to contribute 14,000 gpd during ADWF and 23,400 gpd during PWWF conditions. The PWWF were based on what is known as "peak rain derived inflow and infiltration (RDII)" which were estimated for the Project based on a peak RDII rate of 500 gpd per acre, consistent with the Master Plan.

The Project's ADWF flows were calculated by multiplying the projected increase in residential units by the residential density of 2.45 persons per household and multiplying the result by a per capita flowrate of 66 gallons per capita per day, consistent with standards used for the citywide Master Plan.

The Draft EIR states that wastewater flows would be 18,000 gpd which is in between the ADWF and PWWF calculated in the memorandum. The figures and data from the memorandum are more recent and were calculated by the same engineering firm that is responsible for

developing the citywide Master Plan. As a result, the Draft EIR has been modified to be more consistent with the memorandum and the changes are provided in Chapter 3 of this Final EIR.

The updated estimates for the Project's flows under both ADWF and PWWF, do not change the findings of the Draft EIR's impact assessment, and the wastewater flows attributed to the Project would still be considered less than significant as concluded in the Draft EIR.

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Comment Letter 1

From: Patrick Band <pband@napabike.org>
Sent: Tuesday, November 2, 2021 6:59 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Carlotta Sainato <csainato@napabike.org>
Subject: [External] Request for DEIR Comment Period

Ms. DeRosa -

Following up on my comments at this evening's Planning Commission hearing on the Hunter Subdivision, the Napa County Bicycle Coalition would like to request a 30-day extension of the public comment period on the Draft Environmental Impact Report. 1-1

As we discussed, there are significant shortcomings in the DEIR regarding the various City-adopted Plans that are (and are not) considered, notably the failure to include the 2019 Countywide Bicycle Plan and associated bicycle and multi-use facilities. 1-2

Given the significance of this project for the City, we feel that an additional 30-days to provide sufficient time to more deeply consider and evaluate the DEIR is more than reasonable. 1-3

Thank you for your time and consideration.

--
Patrick Band
Executive Director, Napa County Bicycle Coalition
C: (707) 319-1538
www.NapaBike.org

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Response to Letter 1
Napa County Bicycle Coalition
Patrick Band, Executive Director
November 2, 2021

1-1 The comment is requesting a 30-day extension to the Draft EIR public review period.

The Draft EIR was released for the required 45-day public review period on September 23, 2021 through November 8, 2021. In response to numerous requests, the City extended the comment period through November 30, 2021 for a total of 67 days.

1-2 The comment asserts the Draft has numerous shortcomings but does not provide any substantial evidence as to the basis for this assertion with the exception of stating the Draft EIR failed to include the 2019 Countywide Bicycle Plan and associated bicycle and multi-use facilities.

Information on existing bicycle facilities, specifically Class II bike lanes on area roadways is provided starting on page 3.14-2 in Section 3.14, Transportation and Circulation of the Draft EIR. Existing pedestrian facilities is described on page 3.14-7 and provided on Figure 3.14-3. A discussion of existing bicycle facilities and the transit system in the area is described on page 3.14-8. Figure 3.14-4 provides a graphic of the existing bicycle network in the City of St. Helena. As noted on page 3.14-8 (when the analysis was drafted), “The Napa Valley Transportation Authority (NVTA) adopted the Countywide Bicycle Plan in October 2019, but the City has not yet adopted the plan.” Because the Countywide Bicycle Plan had not been adopted by the City it was not included under section 3.14.3, Regulatory Setting. In addition, a Condition of Approval has been included to require installation of bicycle facilities along the extension of Starr Avennue. The potential for the Project to adversely impact bicycle, pedestrian and transit facilities is addressed under Impact 3.14-1 starting on page 3.14-39.

1-3 The comment reiterates a request to extend the Draft EIR comment period an additional 30 days.

Please see Response to Comment 1-1 that addresses this concern.

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Comment Letter 2

Our Town St. Helena
It all begins at home.

TO: The City of St Helena Planning Commission
RE: Our Town St Helena Comments on Hunter Project

Many people in the community have inquired regarding Our Town St Helena's position on the Hunter Project. Our Town St Helena (OTSH) is a non-profit organization whose mission is to create and preserve housing that is affordable to the people vital to St Helena. The Hunter Project has been under discussion for the entire twelve years of our organization's existence. 2-1

In those 12 years, we have continually advocated for housing that benefits and serves our local community. In this time, we have seen this acute need broaden from housing for the lowest economic rung of our community - agricultural, service and winery workers - to now including the "Missing Middle "– families and professionals making up to $200,000 who cannot afford to purchase or rent a home here. This dramatic change is evident in the 400+ families who have left St Helena between 2000 and 2015 and not been replaced (City of St Helena 2018 Housing Study), and the 6% drop in population recorded in the 2020 census. It is also evident in the increased traffic congestion from commuters and service vehicles. 2-2

We understand this new Draft EIR is analyzing potential environmental impacts of the proposed project, and "housing" is not a specific part of that analysis, yet we feel compelled to comment on the project at this early stage in the process as follows:

1. **The Project is Not Consistent with the City's Basic Requirements for Owner-Occupied and Rental Affordable Units**

The City's Inclusionary Ordinance states that "affordable units shall be comparable in number of bedrooms, exterior appearance and overall quality of construction to market rate units in the same residential project." Further, "Affordable units shall be dispersed throughout the residential project, or, subject to approval of the planning commission, may be clustered within the residential project when this furthers affordable housing opportunities."

In the current Hunter plan, all of the affordable units are two-bedroom rentals while the market rate homes have 3+ bedrooms. The affordable units are isolated to one side of the property and even appear to have a separate entrance. We think that this configuration and siting are not compatible with the City's stated inclusionary basic requirements. We suggest that the City and community would be better served by a more integrated project. 2-3

2. The Project Does Not Serve the Needs of St Helena

The Draft EIR does not address this issue, but it is very important to the community. All new housing does not necessarily serve our community's housing needs. By our rough estimation, based on the size of lots and the cost of construction, the new market rate homes will be priced at or above $2,000,000 each. 2-4

Even with the admirable inclusion of 24 rental units and OTSH's projections that at least some (15%?) of the market-rate homes may be purchased as primary residences, we see little community benefit to St. Helena to building dozens of new second homes. In fact, the migration of primary homes to renovated second homes combined with ever emerging vacation rentals (e.g., Pacaso) is taking "affordable" inventory off the market faster than it can be funded and built. We have seen neighborhoods like Sylvaner and Signorelli, which were built as middle-class subdivisions, slowly slide out of workforce housing and into the multi-million dollar second home market. It would appear the Hunter Project could start out as a primarily second home neighborhood. The 2020 US Census confirms that St. Helena does not have a large primary residence market for $2M+ homes. This is a project that makes sense from a developer's standpoint but does not benefit, and in fact could be detrimental to our community by placing even more demand on the services provided to the second homes by a commuting workforce. 2-5 2-6

3. Is There a Better Way?

In today's environment, the CEQA process provides somewhat standard mitigations to somewhat standard issues. There is no process to evaluate how the project fulfills the specific needs of the community. But our community IS our environment. If our City had a Housing Strategy, developers might try to design a project that could a) fill our needs and therefore, b) be supported by the community.

St Helena needs homeownership opportunities for families making up to 200K. We need townhomes, triplexes, and fourplexes, for sale and for rent, that are affordable to families making $80K and up. And, we need rental units for the people who are essential to the wine and hospitality industries which drive our economy – these are families making $30K to $80K. This is all workforce housing – housing affordable to the people making $30K to $200K who are integral to a functioning community, who participate in our City life and infrastructure, and enrich the lives and livelihoods of all who live here. Every day, St. Helena imports more and more of its workforce, leading to increased traffic and congestion. This IS an environmental impact. 2-7

Could there be ways to make the Hunter Project fulfill these needs? Maybe. But it will require the City to better define what we need and provide innovative incentives to make it happen, a developer that is willing to think outside the box and a community that is willing to increase density for new developments. 2-8

Respectfully Submitted by the OTSH Board of Directors
November 26, 2021

Response to Letter 2
Our Town St. Helena
Our Town St. Helena Board of Directors
November 26, 2021

2-1 The comment notes Our Town St. Helena (OTSH) is a non-profit organization focused on creating and preserving affordable housing and the Hunter project has been under discussion by OTSH for the past 12 years.

The comment is noted and forwarded to the decision-makers for their consideration. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required.

2-2 The comment references the need to advocate for housing that benefits the community and notes the need for affordable housing has expanded to include a much broader range of incomes.

The comment is noted and forwarded to the decision-makers for their consideration. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required.

2-3 The comment refers to the City's Inclusionary/In-Lieu Fee Requirements (Municipal Code Chapter 17.146) and questions if the proposed Project is consistent with the City's requirements.

As noted in the Draft EIR Project Description on pages 2-18 and 2-32, review of an Affordable Housing Agreement by the City Council will be a subsequent discretionary process and is not part of the Tentative Map being considered by the City at this time. A determination of consistency with the City's Inclusionary/In-Lieu Fee Requirements will be made at the time that subsequent Final Map application is submitted and reviewed.

2-4 The comment is addressing the proposed future cost of the houses.

The CEQA Guidelines do not require the fiscal or economic costs of a project to be evaluated. An EIR evaluates physical changes to the environment attributed to a project. (CEQA Guidelines, Section 15358, subd. (b) ["[e]ffects analyzed under CEQA must be related to a physical change"].) Physical changes result from land disturbance due to project construction and development of the overall project "footprint." In addition, physical changes can also include an increase in demand for services and/or increased traffic associated with generating a new population. However, economic considerations are not required to be analyzed or addressed. Therefore, the comment is noted and forwarded to the decision makers for their

consideration. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required.

2-5 The comment offers an opinion that the affordable housing component would have little community benefit and that the Project homes may be purchased as second homes instead of primary residences.

The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

2-6 The comment indicates the Project could be detrimental to the community by increasing demand on city services by people that commute into the city to work.

The Draft EIR evaluated the increase in demand for public services assuming the Project would be fully occupied by full-time residences. The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required.

2-7 The comment expresses a desire for the City to develop a housing strategy that meets the needs of the community and is supported by the community and addresses the need to provide workforce housing for a range of income brackets. The comment also notes that people commuting into the City to work create traffic and congestion.

The comment is noted and forwarded to the decision makers for their consideration. The commentor is also invited to review the Housing Element of the St. Helena General Plan, which addresses local housing needs and includes policies and actions the City will undertake to help meet these needs. The comment does not identify any specific areas where the the Draft EIR is inadequate; therefore, no further response is required.

2-8 The comment supports the City providing incentives to developers and increasing density for new development projects.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required.

Comment Letter 3

-----Original Message-----
From: Ron Amoroso <RJAmoroso@myastound.net>
Sent: Tuesday, October 26, 2021 3:52 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project EIR Comment

Hello:
My name is Ron Amoroso. I am the owner of 1365 Grove Court, St. Helena Ca. The following are my comments on the Draft EIR # 2108032014 (The Hunter Project).

For all the obvious reasons (It's a "Agricultural Area and the reason people (revenue) comes to the Napa Valley) as well as all those much better stated and substantiated in the documentary "Kiss The Ground", I would summarily "disagree" with, and suggest the Planning Department deny allowing this development to be allowed. That movie dramatically shows how plant life causes "Carbon Recapture" that not only reduces pollution, but also "reduces the existing" Co2 buildup that is causing the radical environmental changes we are experiences. Removing the existing acres of vineyards and replacing them with houses, buildings, and other hardscapes will "increase" the production of heat, reduce the production of Carbon recapture back into the soil through "photosynthesis" and reduce air quality as well as the likelihood of adequate rainfall going forward. Please spend a hour and watch this documentary to see how this project will negatively affect this area. Buying "open space somewhere else" as has been proposed by the developer is not going to eradicate the environmental effects on this area. Is that "open space" going to be "prime agricultural" land??
For these considerations, I vote NO on this development!! 3-1 3-2

There are two big "elephants" in the room regarding the immediate impact this proposed project will have directly on this area.

1- Flood potential/The levee/Related Township liabilities

2- Availability of potable water

1- Flood Threat/City/Taxpayer Liability:
The Levee was constructed by the City of St. Helena in an attempt to protect existing "Flood Plains" currently known as Vineyard Valley MHP and the Vineyard where the Hunter Project is being proposed. As such, this levee is only accredited by FEME to 100 year flood specs since it has only been "certified" by FEMA to the 100 year Flood. Currently, it is not "unusual" for those 100 Year Flood values to be surpassed so failure has been deemed by various "experts" as inevitable!! The levee was never inspected by or approved by the Army Core of Engineers or FEMA so the City of St. Helena (Me and all the other St. Helena Tax Payers) are responsible for the results of a breach of that levee. That responsibility, which has been accepted by the City of St. Helena, is one thing when it amounts to Farmland and a MHP, and totally another when it includes 87 new housing units occupied by ?? new residents!! Both in the form of physical bodily risk and financial risk. I am not ready to assume that additional risk so Mr. Hunter can generate a handsome financial gain. Mr. Hunter needs to provide the additional security (possibly a insurance bond) to cover the additional risks that will be incurred as a result of his development converting the existing, former flood plain, "ag-land" into residential housing land. 3-3 3-4

Another reason to vote NO on this development.

2- Water availability:

Adequate potable water availability has been a ongoing issue in St. Helena for the past 15 years that I know of. Not only are there no plans to make it any better, it is routinely getting worse due, in part, to Some of the environmental issues the Hunter Project will only worsen. How can the city of St. Helena approve the addition of 87 new residential units occupied by ?? how many new residents??? Replacing existing toilets with "water saver" toilets is a "clever" idea but also one that is NOT VERIFIABLE. So, where is all the additional water going to come from to support all the new residents who will occupy the 87 new residential units??

3-5

Again, another NO vote on this development.

I don't know if any one of these issues is a "underlying" negative issue against this development. Combined, however, they represent significant and overwhelming reasons to summarily and permanently deny this project to proceed.

3-6

Thank you,

Ron Amoroso

Response to Letter 3
Ron Amoroso
October 26, 2021

3-1 The comment references a movie “Kiss the Ground” that addresses carbon recapture to reduce CO_2. The comment goes on to state that removal of the onsite vineyards and developing homes will increase heat and reduce the recapture of carbon back into the soil through photosynthesis. Lastly, the comment asks if the purchase of open space elsewhere would be “prime agricultural land”.

The Draft EIR addresses climate change in Section 3.7, Greenhouse Gas Emissions. The Project proposes developing the 16.9-acre site, including approximately 6 acres in existing vineyards, with 87 residential units. As discussed in Chapter 2, Project Description, the proposed landscape plan includes planting approximately 185 trees, including scarlet maple (*Acer Rubrum*), Chinese pistache (*Pistacia Chinensis*) and tulip tree (*Liriodendron Tulipifera)*. Furthermore, an approximately one-acre portion of the existing vineyard within the project site would remain. The California Emissions Estimator Model (CalEEMod) includes carbon content values, which are based on Intergovernmental Panel on Climate Change (IPCC) reports, to estimate the loss of sequestered carbon (release of CO_2). Using the factor for “cropland,” the closest land use associated with the existing vineyards, removal of the vines would result in a rate of 6.2 MT CO_2/acre. Regarding carbon sequestration from the planting of a variety of tree species, the Project would result in a sequestration rate of 0.0354 MT CO_2/tree/year assuming growth over 20 years. Therefore, based on these considerations, the Project would result in an overall gain in sequestered carbon, reducing the Project’s GHG emissions presented in Table 3.7-6 of the Draft EIR.

As stated on page 3.2-2 in Section 3.2, Agriculture and Forestry Resources, the state’s Farmland Mapping and Monitoring Program (FMMP) categorizes the eastern portion of the Project site as Farmland of Local Importance (9.0 acres). The western portion of the Project site is predominantly designated as Prime Farmland (5.8 acres), with portions of Farmland of Statewide Importance (0.6 acres) and Urban and Built-Up Land (0.8 acres) in the westernmost area of the Project site. To assess Project impacts the California Land Evaluation and Site Assessment (LESA) Model was used. The model returned a Land Elevaluation or LE score of 35 and a Site Assessemnt or SA score of 13.8 for a total score of 48.8 (see DEIR pp. 3.2-9 – 3.2-10 and Appendix B). As shown in Table 3.2-3 on page 3.2-10, the loss of agricultural resources would be considered significant only if the individual LE and SA subscores are each greater than or equal to 20 points. Therefore, impacts associated with the removal of prime farmland and farmland of statewide importance were found to be less than significant.

If the applicant were to purchase undeveloped land there would be no requirement 5.8 acres would need to be Prime Farmland.

3-2 The commenter requests the City vote no on the Project.

The comment's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

3-3 The comment is addressing concerns regarding the levee and raises FEMA certification of the levee. The comment also notes levees can fail and alleges the levee has never been inspected or approved by FEMA or the Army Corps of Engineers and if the levee were to fail or be breached the City would be liable.

Please see Master Response 3 that addresses all concerns associated with the levee.

3-4 The comment is stating the Project applicant needs to provide additional security to cover any risks that may occur due to developing a former floodplain.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 that addresses concerns associated with the levee and flooding.

3-5 The comment i addresses the availability of water to supply the Project and questions the viability of retrofitting existing fixtures to offset the project's increase in water demand.

Please see Master Response 2 that addresses the issue of water supply.

3-6 The commenter does not support this Project and is recommending the Project not be approved.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

Comment Letter 4

-----Original Message-----
From: Ron Amoroso <RJAmoroso@myastound.net>
Sent: Tuesday, November 2, 2021 12:50 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project EIR Comment

Hello:
My name is Ron Amoroso. I own the property at 1365 Grove Court in St. Helena and would like to offer a EIR comment regarding the Hunter Project proposal.

While it is a great idea to discuss the immediate and quite local environmental effects associated with removing almost 17 acres of vineyards in favor of multiple residential housing buildings and streets, we should also be considering the "overall" effects. 4-1

While it is very important and essential to stop or severely limit the continued pollution of our environment and atmosphere, we should also be looking at, considering, and implementing practices that will begin to "cleanse the existing atmospheric pollution. We should be practicing "Regenerative Agriculture" instead of removing it in place of more carbon producing elements such as those suggested in the creation of the Hunter Project. The existing Vineyards and other green/leafy plants have the effect of drawing down the existing carbon/C02 from the atmosphere and depositing it into the ground where it benefits further plant growth and cleanses the "overall" environment in the process. 4-2

Coupled with the reasons stated in a previous comment, please vote NO to the approval of the Hunter Project!!! 4-3

Thank you,

Ron Amoroso

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Response to Letter 4
Ron Amoroso
November 2, 2021

4-1 The comment indicates that the overall effects of the Project should be considered.

The Draft EIR prepared for the Project evaluates both the project-specific direct and indirect effects associated with construction and operation as well as the cumulative effects of conversion of the land from its existing undeveloped condition to a developed environment. The comment does not specify what overall effects the commentor believes were not addressed in the Draft EIR or why the analysis was inaccurate or inadequate. Therefore, no further response is required.

4-2 The comment refers to the practice of “regenerative agriculture” as a way to limit carbon and CO_2 from entering the atmosphere and to “cleanse” the environment.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 3-1.

4-3 The comment is requesting the City not approve the Project.

The commenter’s opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required.

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Comment Letter 5

From: Bette Antor <bantor8@gmail.com>
Sent: Monday, November 29, 2021 5:56 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

I live in Vineyard Valley and am opposed to the Hunter Project.

My biggest opposition is that the Hunter Project would jeopardize the health and welfare of the residents of Vineyard Valley. 5-1

We would be subjected to a greater chance of flooding as the Hunter property would turn open space to high-density building and paving. 5-2

Also, water is already at a premium and that capacity would be extremely stretched. St. Helena does not have enough water currently for its residents. 5-3

The gate at the north end of VV is currently used by us as an emergency exit. The construction would block that exit. That would leave us with only one way out, Pope Street. The traffic jam would be enormous. In case of the next fire emergency and evacuation (and experts say there will be a "next time"), this could be a matter of life and death for VV residents. 5-4

There are also concerns about water and sewer being hooked up to VV's utility lines on Paseo Grande, our main street. We don't have the capacity to accommodate said utilities. 5-5

The construction would go on for years. Vineyard Valley would bear the brunt of all the noise, dirt, dust and commotion. 5-6

Many of us enjoy the open space as a place to walk, walk our dogs and bicycle. It makes for a healthier lifestyle as most of us at VV are senior citizens. Continuing to access our town's open space is good for our health. I personally walk every day from VV to the Library and back. Open spaces are good for a small town like St. Helena. 5-7

I strongly oppose the Hunter Project and look forward to your response. 5-8

Bette Antor
415 690 0516
Bantor8@gmail.com

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Response to Letter 5
Bette Antor
November 29, 2021

5-1 The commenter states she lives in the adjacent Vineyard Valley mobile home park and is opposed to the Project because it would affect the health and welfare of the residents of Vineyard Valley.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the commentor believes the Draft EIR is inadequate or how the Project would affect the health and welfare of Vineyard Valley residents; therefore, no further response is required.

5-2 The comment states that there would be a greater chance of flooding if the Project site would be converted from undeveloped land to "high-density building and paving".

Conversion of the site from undeveloped to developed would not increase flood risks to the adjacent Vineyard Valley residents. Please see Master Response 3, which addresses concerns associated with flooding.

The use of the term "high density" may reflect the commentor's opinion. However, based on the proposed residential density of 5.1 units per acres, the proposed development would be "medium density" as defined in the General Plan, not "high density" as the term is used in the General Plan.

5-3 The comment suggests that the City does not have adequate water supplies to serve current City residents.

Please see Master Response 2 that addresses water availability to serve the Project in addition to existing City residences and businesses.

5-4 The comment states that Project construction would block the emergency evacuation access for Vineyard Valley residents along the existing levee maintenance road resulting in an increase in traffic that could be a "life or death" situation for Vineyard Valley residents.

Project construction activities would not be allowed to block access to the levee maintenance road, as explained in Master Response 1. Access to the levee maintenance road would be maintained during all construction activities and in the event of an emergency access would be available. All construction trucks and equipment would access the site from either Starr Avenue or Adams Street. No truck access would be permitted on the levee maintenance road. Please see Master Response 1 that addresses emergency evacuation concerns for Vineyard Valley residents.

5-5 The comment raises concerns that the Project would tie into the City's existing water and sewer lines that also serve Vineyard Valley and that adequate capacity is not available in the existing water and sewer infrastructure to serve the Project.

The ability of the City's existing water and wastewater infrastructure to serve the Project is addressed in the Draft EIR in Section 3.13, Utilities and Service Systems. An existing 10-foot wide public water line easement containing an active 12-inch water line bisects the north/northeast portion of the Project site. This easement is proposed to be abandoned as part of the Project and the water line relocated within the site. The Project would tie into this new water line with a looped 8-inch water main that would serve all the residences.

Wastewater flows from the western portion of the Project site are proposed to drain into an existing public manhole at the corner of Starr Avenue and Hunt Avenue via new 8-inch sewer pipes. The area east of Starr Avenue, lower in elevation, is proposed to drain east through the Project site via new 8-inch sewer pipes within a public easement and into an existing public manhole in the Vineyard Valley Mobile Home Park. All new sewer mains and lines are sized to accommodate Project flows, per City standards. Please see also Master Response 4 that provides more details regarding the Project's wastewater infrastructure and the ability of the City to convey and treat the Project's wastewater.

5-6 The comment states Vineyard Valley would be affected by noise, dirt, and dust associated with Project construction.

As described in the Draft EIR in Chapter 2, Project Description, the Project applicant is only requesting approval of a Tentative Subdivision Map at this time. If the Tentative Subdivision Map is approved, the Project applicant would need approval from the City on an Affordable Housing Agreement; Design Review; Final Subdivision Map; and a Use Permit to construct the multi-family units before any grading or construction could begin.

If the Tentative Subdivision Map is approved and the applicant seeks and obtains all other required approvals, the first phase of construction would require site clearing, grading, and trenching for utilities followed by construction of the roadways and residences. For the purposes of the EIR it is assumed construction would occur over a 6+ year period, with the exception of the multi-family units, which the applicant proposes to build within a year of approval of all remaining required discretionary requirements (listed above). The secondary impacts of construction activities resulting in noise, dirt and dust are addressed in Section 3.3, Air Quality and Section 3.11, Noise and Vibration of the Draft EIR.

5-7 The comment notes that access to open space is good for peoples' health and well-being and for the City of St. Helena.

The Project site is not publicly-owned and is therefore not a public open space for the local community to enjoy. The commenter's general comments regarding the value of open space is noted and forwarded to the decision makers for their

consideration. The comment does not identify specific areas where the commentor believes the Draft EIR is inadequate; therefore, no further response is required. Please see Chapter 3, Changes to the Draft EIR for a copy of the trails map. As shown in the map existing trails will still allow access to the Napa River.

5-8 The commenter is stating opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the commentor believes the Draft EIR is inadequate; therefore, no further response is required.

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Comment Letter 6

From: Debbie Austin <debraaaustin@comcast.net>
Sent: Tuesday, November 2, 2021 8:55 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Proposed Hunter Project

Planning Commission,

It is hard for us to understand how anyone in Saint Helena would be in favor of the Hunter Project. In Vineyard Valley we have seniors who need assistance in an emergency and we are concerned with the congestion of traffic and how it would effect us in an emergency situation. 6-1

Beyond that and even worse is our current situation regarding the drought. We've already cut back severely, with no end in sight. The city clearly does not have enough of a water supply available to allow for the housing project. 6-2

We have not spoken to one person in Saint Helena who is in favor of the Hunter Project. 6-3

Craig and Debra Austin

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Response to Letter 6
Craig and Debra Austin
November 2, 2021

6-1 The comment states that they oppose the Project due to potential traffic congestion and emergency access.

The commenters' opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, in response to the comment's concern related to traffic congestion impacts on emergency access, please see Master Response 1 for further information on emergency access and evacuation.

6-2 The comment raises a concern that the City does not have a sufficient water supply to support the Project.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. In response to the commenter's concern related to the City's water supply, please see Master Response 2 that addresses water supply.

6-3 The commenters state an opinion that no one in the City supports the Project.

The commenters' opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 7

From: Katie Avery <mrskatieavery@gmail.com>
Sent: Tuesday, November 30, 2021 10:15 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Jacob Avery <jacobavery@gmail.com>
Subject: [External] Hunter Development EIR Resident Comments

Maya,

My husband and I live at 715 Hunt Ave and vehemently disagree that the Hunter Subdivision Project is what Saint Helena needs. We are not opposed to development of this property, but we are opposed to this particular project as it is currently planned. 7-1

The first glaring issue is that the total units will have a significant impact on our water supply. Based on 3.13-2, the finding that it would be a less-than-significant impact is incomprehensible when current residents are not allowed to water their lawns and are being fined thousands of dollars for going over their allotment of water. We do not have enough water in our city for our current residents. The EIR asks whether the proposed project would require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities. The report says there is a less-than-significant impact. How on earth can this be a realistic conclusion? We would need expanded capacity and more water storage if we were to add a total of 87 units and over 325 new residents. The building department is requiring all new projects meet water neutrality requirements, but the idea that minimal upgrades like replacing toilets and fixtures in other houses with more water saving options is somehow going to offset the water usage of 87+ full new homes/units is nowhere near a realistic projection. 7-2

Further, this water neutrality is based on 2.45 people per unit for medium/higher density residential land uses (City of St. Helena 2013, an outdated study almost a decade ago). According to the EIR, using this factor, the 87 units in the applicant's development proposal (including ADUs) would generate 213 new residents. That is a woeful underestimate that is nowhere near a real life projection. We live in this neighborhood and know that a more reasonable estimate is 2 people minimum per BEDROOM. Even if you do estimate only 1 person per bedroom, you would have 204 people in the market rate homes, 22 people in the 1 bedroom ADU's (assuming 2 people per ADU), and then an additional 25 income restricted workforce housing units (currently at 2 bedrooms and would likely have 4 people minimum in each unit (100 people). That means a total of 326 new residents, a conservative estimate, which is still 35% higher than what the EIR reports. 7-3

More realistically, with 87 new units (51 being 3/4 bedrooms (416 ppl), 25 income restricted, workforce housing units, and 11 ADU's with the rest being 2 bedroom units (140 ppl), there are likely 556 people going to be living in this neighborhood, which is nearly triple what the EIR report estimates. At the very least, we demand that the report considers what this number of new residents will mean to our community instead of the implausibly low numbers in their inaccurate estimates. We need to make sure that any EIR will report on the realistic estimations of the maximum number of people that could potentially live in this development and focus on the impact on services such as water, electric, fire, traffic etc of that many new residents, cars, and traffic, and not made up numbers to help the developer's case. 7-4

Additionally, a highly important, but rarely discussed consequence of this project is that it is projected to take more than 7 years to complete. That is 7 years of construction dust, noise, increased traffic, large trucks, and more which will significantly diminish the quality of life in our neighborhood. In the report, it is asked whether in the proposed project, in addition to cumulative development in the City, increase traffic noise that exceeds the City's noise standards. The report says that the project's contribution would not be 7-5

considerable. We completely disagree. With 7 years of construction, the increase in traffic, noise, and dust/debris will be much higher than the standards in which we live currently. 7-5 Cont.

Further, the report seems to downplay the adverse affect on scenic views around Saint Helena. We have very little green space currently and this property allows many residents to take advantage of nature and the view of the vineyards, forests, mountains, creeks, mustard grass and wildflowers. These will be torn out if the project moves forward and turned into concrete, asphalt, buildings and chemically treated lawns. 7-6

In conclusion, there are a number of inaccurate estimates throughout this EIR that make it difficult to truly understand the real life impacts of this project to the city of Saint Helena and its residents. Not only will it destroy a beautiful green space used daily by residents, we will also have 7 years of big rigs, dust, noise, traffic, water runoff, and ground disturbance that could affect our homes nearby. All of this said, the most dramatic miscalculation is the underestimation of water usage and number of people that will be living in each unit. 7-7

We strongly urge the city of Saint Helena to NOT allow this development to go forward as currently proposed. 7-8

Katie and Jacob Avery

Response to Letter 7
Katie and Jacob Avery
November 30, 2021

7-1 The comment states general opposition to this type of Project type in this location.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. As noted in the Draft EIR on page 2-12 in Chapter 2, Project Description, the Project site has been designated for residential development since the 1975 General Plan and is currently designated for Medium Density Residential in the City's recently adopted General Plan Update 2040.

7-2 The comment states that the commenter and other City residents have undergone water saving measures and have been subject to fines for water use. The comment brings up concerns related to the City's water supply and its ability to serve the Project. Specifically, the comment argues that expanded capacity and additional water storage are needed to serve the Project and that water efficiency requirements for plumbing and bathroom fixtures per the building code are not adequate to meet the City's water neutrality requirements.

Please see Master Response 2 that addresses the City's ability to supply water to the Project and also addresses concerns regarding the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

7-3 The comment questions if the City's person per household (PPH) rate of 2.45 is outdated and is an underestimation; the comment suggests that the Project will create a population increase of 326 new occupants. The comment disputes that the PPH rate and estimates Project occupancy should be higher based on anecdotal evidence.

Population changes alone, do not, in and of themselves, constitute a physical effect on the environment. (CEQA Guidelines, Section 15126.2, subd. (d) [CEQA does not assume that "growth in any area is necessarily beneficial, detrimental, or of little significance to the environment"].) The population estimate cited in the Draft EIR is based on the City's PPH rate used for planning purposes and has little bearing, if any, on the evaluation of physical environmental effects. The projection of the number of people a project would generate is only an estimate and has limited utility because environmental impacts are primarily evaluated using a different metric based on the specific issue being evaluated.

The City's rate of 2.45 PPH for determining population is a blended rate used by the City to determine increases in population per unit for medium/higher density residential land uses. This PPH rate is also consistent with the City's 2040 General Plan EIR population assumptions (see Draft EIR p. ES-4).

Other rates are used to evaluate impacts for different purposes. For example, as stated on page 3.13-24 of the Draft EIR, a Water Neutral Report was prepared for the Project that assumes a higher PPH rate, as compared to the City's PPH, to ensure a conservative calculation of water demand. It is not uncommon for an EIR to include different assumptions depending on the issue area to be evaluated.

7-4 The comment states that the Project would result in more new residents than what is analyzed in the EIR. The comment requests that the EIR evaluate impacts related to utilities, public services, and traffic based on higher population estimates.

Please see Response to Comment 7-3. Physical impacts associated with an increase in population are evaluated by analyzing increased demand for services. The Draft EIR properly evaluated the increase in demand for each potentially impacted resource based on industry standard demand rates provided either by the City or the service provider based on the specific land use to analyze potential environmental impacts caused by the Project.

For the purposes of public services analysis, Section 3.12 of the Draft EIR uses a household size of 2.45 PPH, which as discussed above is consistent with the City's 2040 General Plan EIR population assumptions.

For the purposes of traffic and transportation analysis, Section 3.14 of the Draft EIR does not rely on a population growth estimate, but rather daily trip rates according to the types of residential land use proposed by the Project.

7-5 This comment notes the commentor's concern over the Project's construction timeline. Specifically, the commenter disputes that, because of the anticipated length of the construction timeline, effects related to dust, noise, and traffic would be greater to current residents over time; the commenter also argues that standards for these environmental considerations will be made more stringent as construction progresses.

As described in the Draft EIR in Chapter 2, Project Description, buildout of the Project would occur based on market conditions and timeliness of obtaining future approvals and construction permits. At this time the Project is only requesting approval of the Tentative Subdivision Map which does not include the issuance of construction permits. As noted in the Project Description, while the timeline of future construction is not finalized, the Draft EIR conservatively relies on a 6+ year construction period for analysis purposes. The associated air quality, noise and traffic impacts associated with short-term construction activities on both adjacent residences as well as phases of the Project are evaluated in the respective sections.

7-6 The comment states concern about the Project's aesthetic impact on scenic views around St. Helena. The comment also states the Project will have a negative impact on open space in the community and generally result in undesirable aesthetic impacts.

The Project's impacts on views and change in visual character of the Project site is addressed in Section 3.1 of the Draft EIR, Aesthetics/Visual Resources. The analysis

in Section 3.1 reviews Project compliance with the City's General Plan, Zoning Ordinance, and Design Review requirements and also provides visual simulations of the Proposed Project to illustrate how development of the Project would change views of the Project site. As noted in Chapter 2, Project Description, if the Project is approved the City would require additional subsequent discretionary approvals, including Design Review.

Based on the analysis in the Draft EIR, all Aesthetic impacts would be less than significant with the exception of an increase in lighting that would result in a significant impact. Implementation of Mitigation Measure AES-1, which requires lighting design guidelines be developed for the Project to minimize glare and light spillover would reduce that impact to less than significant.

The commenter's opinion that the Project would result in undesirable impacts is noted and forwarded to the decision makers for their consideration.

7-7 The comment summarizes other comments described above (see comments 7-2 through 7-6), involving open space, the proposed construction timeline, and estimations related to population growth.

Please see Responses to Comments 7-2 through 7-6.

7-8 The comment expresses general opposition to the Project as currently proposed.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 8

From: Trevor Barlow <trevor.barlow@gmail.com>
Sent: Saturday, November 6, 2021 1:45 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

This is application must NOT be approved and MUST be denied. Three major issues (there are many more, traffic, water and tax bases. This project effectively could cause loss of life for Vineyard Valley residents and block their emergency exit in case of fire or earthquakes. This would be a murderous proposition is this project is allowed to move forward. The City then must be held responsible for any loss of life involved. Water: we are in a drought - this project must be stopped immediately if St Helena has any chance of weathering this water shortage. It's not enough to say that this drought will pass because we've been in it for 20 years. It would be irresponsible to allow this due to the water situation alone. The taxes gained would not even cover the added expenses to the city so why would you even consider putting more fiscal problems on our city? 8-1 8-2 8-3

THIS IS A TERRIBLE AND UNRESPONSIBLE PROJECT - DO NOT MOVE FORWARD. 8-4

Trevor Barlow
14 Los Robles Ct
St. Helena, CA 94574

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Response to Letter 8
Trevor Barlow
November 6, 2021

8-1 The comment states general opposition to the Project and asks that the Project be denied.

The comment's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

8-2 The comment raises concerns related to emergency evacuation and access in the event of a fire or earthquake.

Please see Master Response 1 that addresses concerns associated with emergency evacuation.

8-3 The comment raises concerns regarding the City's water supply and Project's tax revenue generation. The commenter is concerned that the Project will worsen current drought conditions and that tax revenue generated by the Project would not cover future City expenses.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, in response to the comment's concern related to the City's water supply, please see Master Response 2.

8-4 The comment states general opposition to the Project and asks that the Project be denied.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 9

October 28, 2021
Ms. Maya Derosa,
St. Helena Planning and Building Director

Dear Ms. Derosa,

My wife and I are deeply opposed to the Hunter Subdivision Project primarily because the City of St. Helena has an inadequate water supply during dry and critically dry rainfall years. Since 2018, St. Helena has experienced three critically dry rainfall events. If this project is approved, it will no doubt create an even greater hardship for the city's current water customers during drought periods. 9-1

St. Helena has delayed undertaking several important capital improvements projects (CIPs) for its water enterprise over the last ten years. Two years ago, St. Helena conducted a master water plan which identified 60 million dollars in needed CIPs. Until these improvements are completed, the Hunter Project's 87 additional housing units will likely over burden St. Helena's current water enterprise. 9-2

Currently, there is no plan to increase St. Helena's limited water supply other than to build a new sewage treatment plant having the ability to provide tertiary water for landscaping. Unfortunately, the construction of the treatment plant is years away from completion and the installation of a city-wide tertiary pipe system is a decade away, and at best, a "pipe dream". 9-3

Our opposition also stems from the fact that much of the data and information used in the 2021 Hunter Subdivision Project Draft EIR has been taken from past St. Helena General Plans extending back to 1993. Climate change has become a major concern during the last several years and none of the data from the City's past General Plans have given global warming the serious attention it currently requires. 9-4

In October of 2020, St. Helena imposed a 43% reduction in water use for its residential customers. This required compliance with a 65 gallon/day/occupant water allotment that resulted in fines and penalties exceeding several million dollars. The ensuing year is currently predicted to be another lower-than-normal rainfall year which may result in St. Helena imposing even stricter water restrictions in the future. 9-5

In the last two years, St. Helena is the only city among five cities in the Napa Valley that has imposed mandatory water allotments on its residential and commercial water customers. American Canyon, Napa, Yountville, and Calistoga have all relied upon "voluntarily compliance" with each city's water restrictions. This is indicative that St. Helena currently has an inadequate water supply during one or more critically dry rainfall years. The Hunter Subdivision Project Draft EIR reads the subdivision will require 20-acre feet/year of municipal water to serve the proposed 87 new residences. The simple fact is, St. Helena currently does not have enough water to sustainably support its current citizens, let alone the number of new residents the project will add to our city. 9-6

The Hunter Subdivision Project Draft EIR reads there is a pre-existing inoperable agricultural water well near the Hunter property. The Draft also reads the project is reliant on the reconstruction of that "inoperable agricultural water well". There are sections in the Draft that make it unclear where the exact location of this inoperable water well is located? In one section, the Draft reads the existing well is "near" the Hunter Subdivision property. In another section, the Draft refers to the water well's location being adjacent to proposed Lot 19. The exact location of the existing agricultural well needs better disclosure because if the existing well does not exist on the Hunter Property, it would be in noncompliance with the city's municipal code to drill a new water well for residential or commercial purposes when the existing inoperable agricultural well was originally intended for agricultural use. (S.H. Municipal Code Section 13.16.080 B.)

9-7

Section 13.16.080(A) of the city's municipal code reads: "Wells shall not be drilled, nor the water produced therefrom used for residential, commercial or industrial land use activities except that replacement well(s) for residential, commercial and/or industrial land uses may be established for well(s) which existed and were in active use prior to the effective date of this chapter; *provided that no net increase in water production results from the replacement well(s)*". It should be noted St. Helena does not maintain historical records of water production from past water wells. Consequently, this provision of the city's municipal code cannot be complied with.

9-8

The Hunter Subdivision Project Draft EIR reads that it is reliant on sharing St. Helena's municipal Stone Bridge water wells. Currently, St. Helena is being sued by Water Audit California contending the city is over-drawing water from its wells and contributing to the seasonal loss of surface flows that adversely impact Napa River's endangered fisheries and aquatic life. The Stone Bridge water wells are located very close to the Napa River and the proposed redevelopment of the Hunter Subdivision's "inoperable" agricultural water well is also very close to the Napa River. If the inoperable well is reactivated, it could potentially add to the further loss of surface flows in the Napa River.

9-9

Additionally, the outcome of the Water Audit Lawsuit may very well limit or even terminate the amount of water St. Helena can pump from its Stone Bridge wells. The presumption of sharing St. Helena municipal water in the Draft Hunter EIR may not be possible after the conclusion of the lawsuit primarily because of the well's impact on California's Public Trust Doctrine and endangered species.

9-10

The Draft EIR for the Hunter Subdivision Project significantly underestimates the amount of municipal water the subdivision will require. This is because the writers of EIRs employ California's Green Building Guidelines (CGBG) to project interior water use. As an example, California's Green Building Guidelines were used to project St. Helena's recent Hunt Street Affordable Housing Project. The guidelines projected the five dwelling units with four occupants per dwelling would require 25 gallons per day per occupant. Currently, under Phase 2 water rationing, St. Helena is being challenged to achieve compliance with residential water customers limiting their water use to 65

9-11

gallons per day per occupant. What is more important, when St. Helena approves new construction using CGMG, there is no routine follow-up by the city to ensure the occupants remain in compliance with the amount of water initially approved for the project. In the long run, this can lead to a greater demand for the city's water than what was originally approved for the development. This issue is further exacerbated because St. Helena's policy treats individual water consumption as proprietary and thereby conceals the information from the public. 9-11 Cont. 9-12

To comply with St. Helena's water neutrality agreement, the developers of the Hunter Project propose to contribute $596,808 in in-lieu fees to retrofit 333 existing households with water saving toilets, shower heads and faucets. The developer claims this will make up for the additional municipal water the Hunter Project will require. The City of St. Helena has experienced several critically dry rainfall years during the last decade at a time when most households have already installed low flow appliances. This leads one to question: *How long it will take to retrofit 333 existing homes in St. Helena? Or, if there are even 333 existing households left in St. Helena needing retrofitting?* 9-13

The bottom line is "Water Neutrality" is an example of bogus terminology. It implies a development will not use more water than was projected in the proposed permit application. Without routine municipal enforcement of the water neutral ordinance's, the term falls significantly short of accomplishing its intended purpose. 9-14

Lastly, the Hunter Subdivision Project is proposed to take place in a flood zone where water damage is possible during a higher-than-normal rainfall year. If the project is ultimately approved by St. Helena's City Council, a condition of the approval should include complete indemnification for the City of St. Helena for any future losses that may occur to the Hunter Subdivision Project due to future flooding. 9-15

Respectfully submitted,

Thomas and Margot Belt
1520 Hillview Place,
St. Helena CA 94574

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Response to Letter 9
Thomas and Margot Belt
October 28, 2021

9-1 The comment expresses opposition to the Project. The commenter asserts a lack of available water to serve the Project and existing water customers.

The commenter's opposition to the Project is noted and forwarded to the decision makers for their consideration. Regarding available water supplies to serve the Project, please see Master Response 2 that addresses the ability of the City to serve the Project as well as existing water customers.

9-2 The comment is referencing the City's Capital Improvement Projects specific to water projects to be undertaken by the City and states that absent these improvements the City will not be able to supply the Project's water needs.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, the comment is noted and forwarded to the decision makers for their consideration. No further response is required; however, please see Master Response 2 that addresses City water infrastructure projects.

9-3 The comment notes that the City has plans to build a new sewage treatment plant to provide tertiary treated water for landscaping, but completion of this project is "years away."

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, the comment is noted and forwarded to the decision makers for their consideration. No further response is required; however, please see Master Response 2 that addresses water supply.

9-4 The comment clarifies opposition to the Project is due to reliance on information from past general plans and expressed concern that the Draft EIR does not address climate change.

The Draft EIR explains on page 2-12 in Chapter 2, Project Description that the Project site was designated for residential development starting in the 1975 General Plan, as Medium Density Residential (MDR) in the 1993 General Plan and is designated MDR in the City's recently adopted General Plan Update 2040. Because the Project's Tentative Subdivision Map application was first submitted in September 2010 and deemed complete by the City in 2011, this EIR is required to reference the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project, since this version of the plan was in effect in 2011. This EIR also evaluates consistency with the City's current General Plan (adopted 2019) for informational and consistency purposes.

It is important to note that the EIR only references applicable goals and policies from the 1993 General Plan. The analysis of Project impacts is based on current technical reports, planning documents, and applicable federal, state and local requirements and laws aimed at addressing pre-and post-development impacts. In addition, changes to the existing environmental condition are also evaluated to determine potential Project impacts.

The effects of climate change are evaluated in Section 3.7, Greenhouse Gases and the analysis references current state and local plans and not the 1993 General Plan (which does not address climate change). As noted in the section, greenhouse gas (GHG) emissions are evaluated on a cumulative level because it is not possible to evaluate GHG impacts on an individual project basis. Global climate change is inherently a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. The Draft EIR addresses the Project's contribution to GHGs which is a leading factor contributing to global climate change.

9-5 The comment is referring to requirements the City imposed in 2020 to conserve water for residential uses and notes the City may impose even stricter water restrictions in the future.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 2 that addresses the City's ability to provide water to serve the Project as well as existing City residences.

9-6 The comment notes that the City of St. Helena is the only jurisdiction that has imposed mandatory water conservation within Napa County and infers this is because the City does not have adequate water supplies during critically dry years. The comment goes on to state the City does not have adequate water to serve its current residents or the Project.

Please see Master Response 2 that addresses the ability of the City to provide water to serve the Project as well as existing City residences.

9-7 The comment asks where the agricultural water well is located on the Project site, stating that if a well does not exist, a new well could not be drilled for residential or commercial use.

The location of the existing well is described on page 2-2 in Chapter 2, Project Description and also shown as Parcel B on the proposed Tentative Map. The location of the existing well is also noted on page 3.9-19 in Section 3.9, Hydrology and Water Quality and on page 3.13-1 in Section 3.13, Utilities and Service Systems. The Project does not include drilling a new well.

9-8 The comment is citing sections of the City's Municipal Code that address requirements for drilling a new well in the City.

The Project is not proposing to drill a new well to serve the water needs of new residential units. The Project is proposing to use the existing agricultural well to irrigate the Project's public and private landscaping. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

9-9 The comment notes water to serve the Project would come, in part, from the City's Stone Bridge Complex groundwater wells which is currently being litigated by Water Audit California. The comment goes on to state if the existing onsite well is reactivated to serve the Project it could add to further loss of water in the Napa River.

The Project's onsite well would draw from the deeper volcanic aquifer, below the Napa Valley alluvium, which is not considered hydraulically connected to the Napa River (see Appendix L of the Draft EIR). Therefore, the proposed pumping from this well is not likely to have any direct effect on surface flow in Napa River. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

9-10 The comment ssuggests that the outcome of the Water Audit litigation could limit the amount of water the City receives from the Stonebridge Complex wells because of potential impacts from the well's (assuming the commenter is referring the Stonebridge Complex wells) on protected species.

The comment is speculating what the outcome of the Water Audit litigation could be on the City and the Project. The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

9-11 The comment expresses an opinion that the Project's water demand is significantly underestimated because the analysis relied on compliance with the State's Green Building Guidelines or CalGreen.

The City requires all new development projects to comply with its Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code that establishes the process to follow to quantify the amount of water a project would require and how this increase in demand would be offset. Because all new development in the state is required to comply with CalGreen water demand is reduced due to the installation of low flow fixtures and other water-conserving requirements. The City has worked with the Project applicant's engineers to ensure the Project's water demand is reasonable, accurate and supported by substantial evidence.

9-12 The comment indicates that there is no follow up by City staff to ensure ongoing compliance with California's Green Building Guidelines to ensure occupants comply with the requirements.

The California Green Building Guidelines or CalGreen (Title 24) includes mandatory requirements for new residential construction including allowable flow rate for faucets and showerheads. The City requires all new development to install water meters, which allows the City to track water usage. The City will ensure compliance with the CalGreen Building Code through inspections that occur throughout Project construction.

9-13 The comment addresses the requirement of the City's Water Neutral Policy (Chapter 13.12, Water Use and Efficiency of the Municipal Code) for an applicant to either pay a fee or retrofit existing residences to offset the increase in demand for water and asks how long it would take to retrofit homes or if there are even enough homes left that need water upgrades.

Please see Master Response 2, which describes options available to retrofit existing residences or facilities to achieve water neutrality.

9-14 The comment questions if the City's Water Neutral Policy (Chapter 13.12, Water Use and Efficiency of the Municipal Code) requirements can work without the City's enforcement of the policy and goes on to say the "term falls significantly short of accomplishing its intended purpose."

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the commentor believes the Draft EIR is inadequate; therefore, no further response is required. However, please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

9-15 The comment notes the Project is proposed within a flood zone where water damage is possible and requests that if the Project is approved the City require, as a condition of approval, that the City be indemnified for any future losses to the Project in the event of a flood event.

Flooding and flood hazards are addressed in detail in the Draft EIR in Section 3.9, Hydrology and Water Quality. As shown on Figure 3.9-2, the Project site is not within a Special Flood Hazard Areas but is mapped as being in an area with reduced flood risk due to a levee (FEMA 2012). By being within an area of reduced risk due to levee, the Project site is considered mapped within the 500-year flood zone (FEMA 2012).

Please see Master Response 3 that addresses concerns regarding the levee.

Comment Letter 10

From: Pierre Birebent <outlook_F3F0A884CA33A7B2@outlook.com>
Sent: Saturday, November 13, 2021 5:09 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter project

Dear Madam

I am very concerned about the development of the open property at the end of Adams street, by the Napa river. 10-1

This is a major construction project. 10-2
Without mentioning traffic congestion I would surely mention the water shortage for our town.
I strongly oppose this insane project. 10-3
Sincerely yours.

Pierre Birebent.

Sent from Mail for Windows

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Response to Letter 10
Pierre Birebent
November 13, 2021

10-1 The comment states a general concern regarding potential development of the property.

The comment's concern is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

10-2 The commenter states that the Project will involve major construction and states general concerns related to traffic congestion and water shortage.

The comment raises a concern related to traffic congestion. Transportation impacts are analyzed in Section 3.14 of the Draft EIR. The operational aspects of the Proposed Project that contribute to delay and congestion on local roadways is no longer considered an environmental impact under CEQA. The Transportation section analyzes transportation impacts related to consistency with plans or policies addressing the City's circulation system, including transit, roadway, bicycle and pedestrian facilities, vehicle miles traveled (VMT), any potential hazardous design elements, and emergency access. Please see Master Response 1 that addresses emergency access.

The Draft EIR concludes that the Project would have less-than-significant impacts to these areas except for an increase in VMT. As described in Section 3.14, the Project would have a significant and unavoidable impact on VMT because the Project's VMT would be 15.2% higher than the Citywide VMT per capita rate and because there are no feasible mitigation measures available to substantially reduce or lessen the impact. As discussed in Chapter 2, Project Description, the Project is currently only requesting approval of a Tentative Subdivision Map at this time. Therefore, as noted on page 2-30, the applicant has not yet prepared a construction phasing plan. It is assumed once the applicant obtains all the remaining approvals site clearing, grading and installation of the backbone infrastructure would be the first phase. Absent specific construction phasing plans the Draft EIR analysis assumed buildout of the Project would occur over a 6-year period. However, buildout could take longer dependent on market conditions and a host of other factors.

The comment also raises concern related to water supply; please see Master Response 2 that addresses the City's ability to supply water.

10-3 The comment expresses general opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

Comment Letter 11

From: Trudy Bouligny <tbouligny@gmail.com>
Sent: Sunday, October 10, 2021 10:20 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project - Public Comment

To St Helena Planning Dept
Attn M De Rosa
Reference: The Hunter Project, St Helena CA

Please add our concerns to the file for the proposed Hunter Project which has come back to life after being soundly rejected 6 years ago. This project still has no grounds for approval. It is in an area of possible serious flooding, there is a dire lack of water in the town of St Helena, traffic issues will be exacerbated by dumping vehicles on Pope St to cross a totally inadequate bridge with a dangerous intersection at the Silverado Trail. The list of problems is lengthy and it doesn't take an expensive EIR consultancy fee to be realistic about the negative impacts to the community. Please reject the proposal when it comes before the Planning Commission. 11-1 11-2

Sincerely
Earl and Trudy Bouligny
497 Silverado Trail
St Helena CA 94574
Earl and Trudy Bouligny
497 Silverado Trail S
St Helena CA 94574
707-963-0814
707-738-1230 M

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Response to Letter 11
Earl and Trudy Bouligny
October 10, 2021

11-1 The comment claims that the Project was "soundly rejected six years ago," and that it should not be approved. The comment also notes general concerns related to potential flooding, water supply, and traffic.

The comment is noted and has also been forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code and Master Response 3 that addresses concerns associated with the levee and flooding. Traffic concerns are addressed in Responses to Comment 10-2.

Regarding the earlier public review of the Project, it is noted that the Project was considered by the St. Helena Planning Commission on September 17, 2013, at which time the hearing was continued to a date not certain. The Project was neither approved nor denied, and remains an active application.

11-2 The comment expresses general opposition to the Project and asks that the Project be denied.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 12

-----Original Message-----
From: Karen Bradley <bradleyhuskers@comcast.net>
Sent: Tuesday, November 30, 2021 1:48 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

If possible I would like to add our names to the Vineyard Valley response to the Hunter project. 12-1

Karen & Kevin Bradley
6 San Juan Ct.

Thank you,
Karen Bradley

Sent from my iPad

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Response to Letter 12
Karen and Kevin Bradley
November 30, 2021

12-1 The comment requests the commenters' names to be added to the Vineyard Valley comment letter for the Project.

It is not clear from the comment, but it is assumed the commenter is requesting their names be added to the letter submitted by the Vineyard Valley Managing Partners, see Letter 111. The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 13

-----Original Message-----
From: Greg Brown <gwbrown_2000@yahoo.com>
Sent: Tuesday, November 2, 2021 12:26 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Subject: [External] Hunter Project

The DEIR quotes substantial impacts to traffic and water use with the Hunter Project. How can this Project be justified in light of the current water emergency and the current sorry state of our streets? 13-1

Greg Brown
1179 Starr Ave
St Helena

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Response to Letter 13
Greg Brown
November 2, 2021

13-1 The comment states that the Project could cause water use and traffic impacts; the comment also asserts that the Project should not be approved given the condition of the City's streets and water supply.

The commenter's general concerns regarding water and traffic is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

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Comment Letter 14

November 29, 2021

Maya DeRosa, Building and Planning Director
City of St. Helena
mderosa@cityofsthelena.org

Re: Hunter DEIR Public Comment

Ms. DeRosa:

Thank you for the opportunity to review and comment on the Draft EIR for the Hunter project. For the past 17 years, I have lived less than ¼-mile from the project site and have frequented the nature trail adjacent to the site at least weekly. Below please find my comments on four sections of the draft. 14-1

3.4-1 Wildlife Habitat

The EIR only provides commentary on "Special Status Wildlife," and only the white-tailed kite and pallid bat are considered potentially affected. I can't say that I've seen the kite or the pallid bat in that area, but over the past years I have seen bats and I have watched at least three different species of hawks hunt at the project site. Great blue heron and black-crowned night heron are commonly seen in the adjacent open space and trees. Perhaps none of these species have special status, but at what point is their occupation of the land worthy of consideration? At what point do we consider the cumulative effects of this and other projects that continue to take away large chunks of open space from birds and ground animals which depend on these foraging and hunting grounds? 14-2

3.4-3 Migratory Corridors

For the past 17 years, I have watched Canada Geese fly up and down the Valley, directly over my house, and routinely stopping to forage at the Project Site. This usage decreased when a large portion of the site was planted to grapes, but the geese continue to use the undeveloped area. Anyone who has lived on the floor of the Valley knows that it is a significant migratory corridor for Canada Geese. 14-3

The EIR states, "Lighting and increased usage of the site by humans may result in indirect effects to local wildlife using the riparian corridor for nursery sites or as a migratory corridor. Any site disturbance to these resources could result in a potentially significant impact." It goes on to state that the Project's Mitigation Measures such as reducing glare will mitigate impacts. This section of the EIR provides a myopic viewpoint by first stating that wildlife is not present and unaffected, then going on to state that mitigation measures will take care of everything. Reducing glare is meaningless when you have completely removed their habitat. What about the geese??? 14-4

The Project, with its measly one-half acre of remaining open space, will completely remove this historically valuable migratory stopping ground for Canada Geese. This significant impact is omitted in the Draft EIR. 14-5

The EIR authors will dismiss these wildlife and migratory corridor comments. They will tell you that all the impacts have been mitigated, that the Canada Geese and the hawks and the bats and the fox and skunks and coyotes and countless other species who have historically used the Project site have other places to forage and nest and hunt. They will say these species aren't "special." They will say there is no significant impact. But at the end of the day, what was once open space used by all these animals will be gone forever and replaced with homes and roads and cars and noise. The cumulative effect of project after project in this Valley will add up, the habitat will be gone, and with it the wildlife. 14-6

3.13 Infrastructure – Water

The analysis of water impacts is quite long and difficult to follow. The City should consider how a revised EIR and future EIR's could be required to provide impacts and conclusions which are easier to understand. Regardless, I have several issues with the EIR water analysis and its conclusions: 14-7

1. Table 3.13-8 shows projected supply and demand data from the 2010 Water Supply Plan, which concluded that "water supplies under both the Likely Buildout Scenario and Full Buildout Scenario would not be sufficient to meet demands during all scenarios." The 2010 Plan went on to conclude that "the long-term safe yield of the City's water supply is 1,950 acre-feet per year." The deficit between this safe yield and the projected demands on Table 3.13-8 was presumed to be made up by approximately 500 acre-feet of future conservation efforts. It claims that these efforts have been successful since usage has averaged 1,637 acre-feet from 2013-2020. Having provided these data points, the EIR then concludes, "Considering the current downward water usage trend due to water conservation measures and that future demands are required to offset their projected use, future water demand is not expected to exceed the existing policy limit of 1,950 acre-feet annual use set by the Safe Yield Committee..." 14-8

   I have two issues with this analysis. First, on the supply side, the EIR gives credence to the 1,950 acre-feet supply as though it is a sustainable value for the foreseeable future. This value was established in a 2010 study. Since then, 11 years later, our Valley has and continues to change significantly. It is hotter and it is drier. This change has been accelerating in the past five years, and yet the EIR is basing the City's sustainable water supply on 2010 data. The EIR should show a combination of historical rainfall through 2021 along with some projections of the accelerating effects of climate change to at least offer a scientifically based forecast of a truly sustainable water supply value for the next 30 years. It is likely that climate change will drive us towards a supply value more like those shown in Table 3.13-8 for "dry year" or "critical dry year." *The supply values for these categories are 12% - 34% below the 1,950 acre-feet value which the EIR assumes is sustainable.* In citing the 2010 Safe Yield value of 1,950 acre-feet, the EIR has made a wishful and risky assumption of the stability of the City's water supply which benefits the Applicant. 14-9

   Secondly, on the demand side, I have issue with the overly simplistic and optimistic conclusion that future water demand will not exceed the City's supply. As previously quoted, the EIR claims that the City is on a "current downward usage trend" based on data from 2013-2020 in Table 3.13-1. This is not true! The EIR takes as its starting point usage from 2013 (1,882 acre-feet), compares it to 2020 usage (1,629 acre-feet) and concludes a downward trend. In fact, if one 14-10

uses 2015 as the starting point, there is clearly a trend of *increasing* usage over the past six years, and *during a time in which the City has made a focused conservation effort*.

14-10 Cont.

Further issue on the demand side is the lack of credible evidence or any attempt to validate the notion that water offsets or in-lieu of payments will keep the growing demand (see previous paragraph) below the likely decreasing supply limit of 1,950 acre-feet. There is not an endless supply of old toilets in town to replace with new ones and there are limitations on what the City can do with in-lieu fees to curb demand. I find the conclusion that "future water demand is not expected to exceed the existing policy limit" to be another leap of faith to the benefit of the Applicant, as it poses an unrealistic baseline assumption that we need not concern ourselves with the actual water usage of the project (or other future projects for that matter).

14-11

2. On page 3.13-31, the EIR attempts to answer question 3.13-2 "Would sufficient water supplies be available to serve the Proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years?"

The EIR again takes shelter in the outdated 2010 Safe Yield value of 1,950 acre-feet, but fails to answer the question. As I noted earlier, we have good reason to question the integrity of the 1,950 value, but regardless, the question posed here asks about dry and multiple dry years. Again referring to Table 3.13-8, the City's supply for dry and critically dry years are 12% - 34% below the 1,950 acre-feet value. Given the trend of the past five years, how can this EIR ignore climate change and the increasing likelihood that 1,950 is not a sustainable value and that City supply could be significantly less for any given year or multiple years? Do not ignore the drought! Do not ignore the last five years!

14-12

Furthermore, the EIR again takes shelter in the notion that the City's water-neutrality policy will offset future use. So, what does water-neutrality mean for this project? Let's look at the Water Neutral Report in Appendix J. The proposed mitigation measures identified in the report include:

> "1. Assist the City in fixing the leaking transmission line between the City and Rutherford. It's our understanding there is a substantial amount of water lost as part of the old pipeline.
> 2. Place/replace water meters that are not in place or functioning improperly.
> 3. Paying the in-lieu fee to be used by the City for any of the options identified in the attached Report or otherwise selected by the City."

14-13

Fixing a transmission line leak is not offsetting future water demand. Fixing a leak simply maintains the supply—*it does not reduce usage* by this Project or anywhere else in town. Replacing water meters could influence use but it does not in and of itself reduce demand. Paying fees could reduce demand, but only if the City uses those fees to reduce demand. In the end, Appendix J proposes that the Applicant pay an in-lieu of fee of $596k—a nice sum, but when the increased demand of this Project's 76+ units hits the water system, what will have been done by the Applicant or the City to truly offset this demand? It looks like a lot of math without a true impact.

Developers are buying entitlement then burdening the system with increased demand. This lack of true offset is perhaps evidenced by the increase in usage from 2016 (1,465 acre-feet) to 2020

14-14

(1,629 acre-feet), an increase of over 11%. Usage should have been decreasing, but it has not because the offset program does not work, it just provides developers with another way to buy entitlement. 14-14 Cont.

Lastly, the EIR makes no attempt to address the question about "reasonably foreseeable future development." Given the conflicts between general plans, growth ordinances, and SB330, it is understandably difficult to forecast the actual number of housing units in the foreseeable future, but that is not a good reason to make overly simplistic assumptions which favor the Applicant. Development pressure is ever-increasing in St. Helena and one-by-one, the project EIRs make claims of "less than significant impact" while cumulatively making a very significant impact. The City must provide guidance to the EIR process which makes science-based forecasts of "reasonably foreseeable future development" so that assessments such as this EIR can properly consider cumulative impacts. Question 3.13-2 was not fully answered. 14-15

In summary, the entire water supply, demand, and impact analysis is thick with math but thin with science. It relies on dated values such as the 2010 Safe Yield without due consideration of climate change, and it assumes water offsets that are not defined and likely will not be realized.

For the past 10 years, the City's residents have dealt with the harsh reality of drought. Whereas in generations past there was always hope for droughts to end, climate change has made drought a likely standard rather than exception. It is incumbent upon the City to take a conservative approach to the supply data being used by developers and by EIR authors; otherwise, the cumulative effect of projects approved on old data will result in a water deficit we can't overcome. 14-16

The City must re-evaluate the Safe Yield based on current data and climate change forecasts. The City must have more certainty regarding its water supply. The City must get past its current water emergency restrictions. Then and only then should the City even consider a project of this size. To approve this project under the current conditions is risky and cavalier. The City's residents have worked hard to endure the effects of the drought. We shouldn't have to shoulder the risk this Project poses to our collective future. 14-17

3.14-2 CEQA 15064.3(b) VMT Criteria

Although the EIR seeks multiple ways to mitigate VMT for the Project, it ultimately concludes that "Because there are no feasible mitigation measures available to substantially reduce or lessen the impact of the Proposed Project to less than significant, the impact is a **significant and unavoidable impact**." Next to water, our City's primary struggle is with increasing traffic and congestion. The cumulative effect of unchecked regional development has created horrendous traffic challenges in St. Helena which increasingly detract from quality of life for residents and quality of experience for tourists. The inability of the Project to mitigate significant impact of traffic is important and another reason to delay consideration of a project this large until the City can conservatively absorb the impact. 14-18

Concluding Comments

Several years ago, the City decided to protect Vineyard Valley from future floods. The City had multiple engineering options to accomplish that objective. Ultimately, the City—on behalf of its taxpayers— 14-19

gifted Dennis Hunter with a levee that turned his floodplain into a valuable piece of developable land. The City—on behalf of its taxpayers—then wrote Dennis Hunter a big check to pay for a thin and otherwise useless strip of land to build a portion of the levee which in turn made his land so valuable. The City—on behalf of its taxpayers—then gave him all the dirt from the flood project to build up his site. If this project is approved, it will tax our water supply and traffic, and guess who will pay for that? The City's residents will pay for it in further water restrictions and increased traffic. Dennis Hunter will have paid some modest impact fees which will not come close to addressing the actual impacts and, once again, the City's taxpayers will be left to pick up the tab for this and all the other cumulative impacts of projects whose EIRs espoused similar "less than significant" impacts or showed lots of math to rationalize how our over-burdened infrastructure could—remarkably—handle yet another project!

14-19 Cont.

The City is not ready for this project. At the very least, it needs to scientifically assess climate change impact on future water supply. It needs to accurately assess future development impact, both residential and commercial, on water and traffic. It needs to assess water demand without making unrealistic assumptions about conservation. It needs to reconfigure its water neutrality requirements such that future projects must truly offset demand, not simply buy their way out.

14-20

The City cannot afford to continue a pattern of approval based on EIR's which make rosy assumptions based on old or incomplete data. It must start making hard decisions which favor its citizens and not out-of-town developers.

14-21

Thank you for considering my comments.

Regards,

Ethan Brown
Owner, 489 Fulton Lane

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Response to Letter 14
Ethan Brown
November 29, 2021

14-1 The commenter notes that they live near the Project site and frequently uses the trail adjacent to the site.

This comment is an introduction to comments that follow. The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

14-2 The comment notes that the Draft EIR focuses on impacts to special-status wildlife and describes their observations of common wildlife species using the Project site, notably bats, hawks, great blue heron, and black-crowned night heron. The comment requests analysis of cumulative effects of development on birds and other animals that use the Project site and vicinity.

The Draft EIR analyzes impacts to biological resources using the thresholds of significance listed on page 3.4-42. These thresholds, which are taken from the State CEQA Guidelines Appendix G, do focus the analysis on special-status species due to their sensitivity to impacts. However, the thresholds do include interference with movement of native resident wildlife species and migratory corridors, regardless of the species status. The Draft EIR identifies a significant impact to migratory corridors and potential nursery sites within the adjacent riparian corridor and provides mitigation (BIO-5 and AES-1) to reduce the impact to less than significant. The thresholds also consider any conflicts with any local policies; however, there are no local policies that provide protections for non-special-status wildlife.

The Draft EIR analyzes impacts to bat and bird species (DEIR pp. 3.4-46 through 3.4-47) and includes mitigation measures to reduce potential impacts to bat species (BIO-1) and bird species (BIO-2). These analyses and mitigation measures apply to both special-status and non-special-status species. The Draft EIR also analyzes cumulative impacts of the project (DEIR p. 3.4-51), finding that the Project's contribution to cumulative impacts would be less than significant due to the relatively low habitat value of the Project site and the availability of similar or better habitat in the vicinity.

14-3 The comment describes observations of Canada geese foraging on the Project site within the remnant grassland. The comment asserts that the Napa Valley is a significant migratory corridor for Canada geese.

Although Canada geese may periodically forage on the Project site, it is unlikely that the approximately 9.7 acres of mowed annual grassland without a nearby open water area represents critical foraging habitat for this highly adaptable species. This species is not a federal or state protected species but they are protected under the Migratory Bird Treaty Act, as are all migratory birds. Canadian geese are regionally abundant and have become resident in many areas (Mowbray et al. 2020)[8].

14-4 The comment asserts that the Project would remove habitat and that reducing glare would only be valid mitigation measure for areas that retain habitat value.

The comment is correct and mitigation measure BIO-3 requires wetland permits (e.g., 404 Nationwide Permit, 401 Water Quality Certification, and 1602 Streambed Alteration Agreement, respectively) be obtained prior to any grading work to ensure no net loss of wetlands or other protected waters. This mitigation focuses on reducing operational indirect impacts to the riparian corridor such that it will continue to provide habitat after Project development. Refer to Response to Comment 14-3 regarding impacts to Canada geese.

14-5 The comment notes again that the Project would adversely affect Canada geese that may stopover to forage on the Project site.

Please refer to Response to Comment 14-3.

14-6 The comment summarizes the points raised in Comments 14-2 through 14-4.

Please refer to Responses to Comments 14-2 through 14-4.

14-7 The comment states the analysis of water impacts is long and difficult to follow and requests the City consider how to make future EIRs easier to understand.

The commenter's request is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

14-8 The comment refers to data presented in Table 3.13-8 of Section 3.13, Utilities and Service Systems, of the Draft EIR that references the City's water supply and demand usage.

The comment provides an introduction to the following comments. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. Please refer to Response to Comment 14-9 that addresses water supply and demand.

[8] Mowbray, T. B., C. R. Ely, J. S. Sedinger, and R. E. Trost (2020). *Canada Goose* (Branta canadensis), version 1.0. In Birds of the World (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. *https://doi.org/10.2173/bow.cangoo.01*

14-9 The comment suggests that the City's 2010 Water Supply Plan is inadequate and that the referenced long-term safe yield of 1,950 acre-feet does not consider climate changes since that plan was completed.

The City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code requires that "new development" shall be contingent upon the ability of the City to provide water without exceeding safe yield. In December 2010, the City Council appointed the Safe Yield Committee to determine the annual safe yield of the City's potable water system. The ultimate goal of the Committee was to determine whether, at the present time, potable water usage was below, above, or equal to the safe yield of the potable water supply system. The Safe Yield Committee analyzed the reliability of the City's water supplies in a 2010 study and determined that providing a total supply of up to 1,950 acre-feet was sustainable and has been adopted by the City as a policy limit. While climate change can create drier years in which precipitation is below annual averages, it can also result in very wet years.

The purpose of establishing a safe yield considers that precipitation can and likely will vary considerable from year to year and periods of extended droughts will occur. Note that St. Helena Municipal Code (SHMC) Title 13 - Public Services, Chapter 13.04 Water Service System, Article 2 *Water Shortage Emergencies, Drought and Water Conservation* regulate the establishment of water emergency phases, water conservation, and regulations that can adapt to changing conditions and enact emergency requirements for users as appropriate. However, the main purpose for providing this information (i.e., the safe yield) is provided as part of establishing existing conditions and background for the City water supplies and policy limits adopted by the City. The Draft EIR analyzes the potential effects of the Proposed Project including its specific water demand and whether there would be a significant impact due to the effects of the Project. This analysis is included beginning on page 3.13-31 as well as on page 3.9-40 and compares the proposed demand by the Project against the past actual demand numbers for the City compared to the adopted policy limits. Please see also Master Response 2 that addresses water issues.

14-10 The comment challenges the conclusion made in the Draft EIR that water demands for the City are on a downward trend.

The commenter suggests that viewing data from between 2015 and 2020 instead of between 2013 and 2020, as presented in Table 3.13-1 in Section 3.13, Utilities and Service Systems, of the Draft EIR would change the conclusion of the recent trend. As shown in Table 3.13-1 of the Draft EIR, the City's water deliveries have varied from year to year but overall have decreased from 1,882 acre-feet in 2013 to 1,629 acre-feet in 2020. Looking at the longer trend from 2013 to 2020, instead of just from 2016 to 2020, reflects a downward trend in water deliveries. Please see also Master Response 2 that addresses water issues.

14-11 The comment suggests that there is insufficient evidence to support the conclusion that water offsets or in-lieu payments would help limit water demands below 1,950 acre-feet.

The analysis on page 3.13-24 of the Draft EIR shows how the Proposed Project's indoor water demands of 19.88 acre-feet would not combine with the highest City demand over the last 8 years (1,882 acre-feet) to be above the policy limit of 1,950 acre-feet. The 1,950 acre-feet figure represents what the City considers to be the safe yield for the water supply system and is not a "supply limit". Note that St. Helena Municipal Code Title 13 - Public Services, Chapter 13.04 Water Service System, Article 2 Water Shortage Emergencies, Drought and Water Conservation regulate the establishment of water emergency phases, water conservation, and regulations that can adapt to changing conditions and enact emergency requirements for users as appropriate.

14-12 The comment concerns the validity of the City's use of a safe yield of 1,950 acre-feet in the face of climate change.

As discussed in Response to Comment 14-9, the City is currently using the safe yield of 1,950 acre-feet developed by the Safe Yield Committee as a guideline policy but can also impose emergency measures (St. Helena Municipal Code Title 13, Chapter 13.04, Article 2) that can be used to emplace water conservation and regulations as necessary. The Project is also required to adhere to the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code. As discussed in more detail on page 3.13-31 of the Draft EIR, a Water Neutral Report (Appendix J) was prepared for the Proposed Project (required by the City) to demonstrate compliance with the City's Water Neutral Policy by providing in-lieu fees to fund conservations measures that offset the water demands of the Project. Therefore, the City's safe yield value of 1,950 acre-feet is not the sole basis of the analysis as to whether the Proposed Project would have a significant effect on water supply during dry and critically dry years.

Please see also Master Response 2 that addresses water issues.

14-13 The comment takes issue with the effectiveness of the City's Water Neutral Policy and how it is used in the analysis of the Project's water demand.

Adherence to the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code to fund such measures as fixing an existing leaking water conveyance pipe does offset demand by increasing water supplies compared to the existing conditions of water losses due to the leak. As a result, compliance with the Water Neutral Policy offsets new water demand with measures that reduce demand elsewhere or otherwise increase water supplies. Therefore, the City's Water Neutral Policy and Municipal Code requirements is an appropriate and effective measure to include in the analysis of the Draft EIR. Please see also Master Response 2 that addresses water issues.

14-14 The comment suggests that the offset program [Water Neutral Policy] does not work as evidenced by an increase in the water demands in 2016 (1,465 acre-feet) as compared to 2020 (1,629 acre-feet).

As shown in Table 3.13-1 of the Draft EIR, the City's water deliveries have varied from year to year but overall have decreased from 1,882 acre-feet in 2013 to 1,629 acre-feet in 2020. Looking at the longer trend from 2013 to 2020, instead of just from 2016 to 2020, indicates a downward trend in water deliveries. See also Master Response 2 that addresses concerns associated with available water supplies.

14-15 The comment suggests that "reasonably foreseeable future development" was not adequately considered in the analysis of Impact 3.13-2.

The analysis of Impact 3.13-2 beginning on page 3.13-31 of the Draft EIR, includes discussion of the long-term safe yield that was adopted by the City in 2011 that would apply to all future development. The analysis also discusses how future development is required to adhere to the state's CalGreen requirements, as well as the City's MWELO irrigation requirements for landscaping. In addition, all reasonably foreseeable future development would be required to adhere to the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code and any emergency water conservation phases that may be enacted. In particular, the Water Neutral Policy requires that the Project, as well as reasonably foreseeable future development, must demonstrate a quantitative analysis of the Project's water demand. For offsite improvements, the required number of retrofits have to be completed prior to the issuance of a certificate of occupancy for the new development. Inclusion of these regulatory requirements demonstrates how the Project, along with reasonably foreseeable future development would not significantly impact water supplies during normal, dry, and multiple dry years.

14-16 The comment claims that the water supply and demand analysis is insufficient, does not consider climate change, and that the water offsets required for the Project to be water neutral will not be realized.

As referenced in Response to Comment 14-9, the City adopted the safe yield as policy but also included conservation measures that can be employed during drought periods. The safe yield considers that multiple dry years are likely due to climate change and the additional measures as well as the Water Neutral Policy and Municipal Code requirements can be effective tools to adapt to variances in precipitation that is expected under normal conditions as well as what can be anticipated with climate change. Data documenting the City's water deliveries since 2013, not long after adopting the Safe Yield Committee's report as policy, indicates that a downward trend has occurred despite covering some very dry years during that timeframe. See also Master Response 2 that addresses water supply.

14-17 The comment recommends that the City re-evaluate the safe yield policy and get past the current emergency restrictions prior to approval of the Project.

The comment does not directly address the adequacy of the Draft EIR, but rather makes suggestions for the City related to its policies regarding water supply management. As detailed in the Draft EIR on page 3.13-3 in Table 3.13-1, the City's water deliveries have been on a downward trend from 2013-2020. Through this period, the water deliveries have been below the safe yield and as noted on page 3.19-40 of the Draft EIR, the groundwater Subbasin, one of the sources of water supply, was recently found to be exhibit stable groundwater levels. The emergency restrictions have been enacted in order to continue effectively manage the water supply system during periods of low rainfall and combined with the Water Neutral Policy and Municipal Code requirements ensures that water supplies will meet demand.

14-18 The comment addresses cumulative traffic conditions in the City and notes that because the Project would result in a significant and unavoidable impact related to Vehicle Miles Traveled, the City should delay consideration of the Project until the underlying traffic and infrastructure issues are addressed.

The commenter's opinion that approval of the Project should be delayed is noted and forwarded to the decision makers for their review.

14-19 The comment provides the commenter's perspective on the City's decision to construct a levee and floodwall along a portion of the Napa River.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

Please see Master Response 3 that addresses the history of the levee and floodwall.

14-20 The comment states that a scientific analysis of the effects of climate change on water supply need to be addressed along with an assessment of future development on water supply and traffic and the City's Water Neutral Policy needs to ensure projects offset their water demand and not just pay a fee.

The comment does not identify any specific issues with the accuracy or adequacy of information provided in the Draft EIR. Regarding climate change, the Draft EIR evaluates the Project's increase in greenhouse gas emissions (GHG) which contribute to global climate change in Section 3.7, Greenhouse Gases. The analysis reflects what the California Environmental Quality Act or CEQA requires be evaluated which includes quantifying the Project's GHG emissions to determine if the Project exceeds adopted thresholds. The Project's increase in demand for water is evaluated in Section 3.13, Utilities and Service Systems and traffic is evaluated in Section 3.14, Transportation and Circulation. The commenter's opinion that the City's Water Neutral Policy including Chapter 13.12, Water Use and Efficiency of the

Municipal Code needs to be reconfigured is noted and forwarded to the decision makers for their consideration.

14-21 The comment expresses an opinion that EIRs should not rely on old or incomplete data and residents of the City versus out of town developers need to be considered when making land use decisions.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

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Comment Letter 15

From: Andree Bryan <andree@bryanconsulting.net>
Sent: Saturday, October 30, 2021 4:18 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] I AM OPPOSED TO THE HUNTER PROJECT

Hi Maya DeRosa,

I am writing to let you know that I am very opposed to the Hunter Subdivision Project.

My concerns are:

1. Availability of water
2. The plan calls for sharing water with Vineyard Valley --- I AM VERY OPPOSED TO THIS!
3. Impact on traffic. Our city has become unbearable when it comes to traffic and now you want to build 51 homes in a small, small area.
4. You will destroy the beauty of the walking trail that so many of us enjoy. Saint Helena does next to nothing for it's residents in terms of walking paths and accessibility to nature. This is probably our only walking path --- and you want to take that away.
5. I have yet to see an environmental impact study.

15-1

15-2

15-3

15-4

Thank you,

Andree Bryan
Resident of SH and Vineyard Valley

Andree Bryan
Board of Director
St. Helena Public Library – Friends and Family
andree@bryanconsulting.net
M: 707 332-9124

Have a magically wonderful day!

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Response to Letter 15
Andree Bryan
October 30, 2021

15-1 The comment states a concern related to water availability. The comment also states opposition against the Project's proposed water sharing component with Vineyard Valley.

Please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

15-2 The comment expresses concern over the Project's impact on traffic.

Please see Response to Comment 10-2 that addresses traffic concerns.

15-3 The comment expresses concern regarding the Project's impact on the adjacent walking trail.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Response to Comment 106-3. In addition, please see Chapter 3, Changes to the Draft EIR, for a new figure that shows the adjacent trails.

15-4 The comment states that the commenter has not obtained access to the Project's "environmental impact study."

The City sent notices to all residences within 300 feet of the Project site that an EIR was available for review, per City requirements and will also send notices for future public hearings.

The City also sent a Notice of Availability on September 23, 2021, to public agencies and interested parties that the City had released the Draft EIR for review and comment. Based on requests from the public, the City extended the public comment period from the required 45-days to 67-days to provide more time for review and comment. During this review period, the Draft EIR for the Project was available for review at (1) the St. Helena Public Library, 1492 Library Lane, St. Helena, CA 94574; (2) St. Helena Planning Department, 1572 Railroad Avenue, St. Helena, CA 94574; and (3) on the City's website at https://www.cityofsthelena.org/planning/page/ceqa-document-center.

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Comment Letter 16

-----Original Message-----
From: Bernerd Buckley <bernerdbuckley@gmail.com>
Sent: Tuesday, October 26, 2021 4:08 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>; Paul Dohring <PDohring@cityofsthelena.org>
Subject: [External] Hunter project

The proposed Hunter project will have 87 water consuming households. The project's consultants claim the project will be water neutral if 333 existing homes are retrofitted with new toilets, shower heads and faucets. The only way to know for sure is to install in all 333 homes and monitor the usage for at least a year's climate cycle. Under the extreme drought we going through, it's in the best interest of the people who currently live in Saint Helena that their water needs are met. We need to know for sure if the Hunter project is water neutral!!

16-1

Sent from my iPhone

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Response to Letter 16
Bernerd Buckley
October 26, 2021

16-1 The comment expresses concern over the Project's water neutrality and the City's water supply. The commenter requests that the Project be monitored for a year to ensure water neutrality is met.

Please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

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Comment Letter 17

-----Original Message-----
From: Bernerd Buckley <bernerdbuckley@gmail.com>
Sent: Tuesday, October 26, 2021 4:35 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>; Paul Dohring <PDohring@cityofsthelena.org>
Subject: [External] Hunter project

The levee that's supposed to protect the proposed development it is said to be sufficient to withstand the 200 year flood. In the DEIR it says that if the levee fails, the houses behind would only flood the first floor's by 5 feet. People could escape to the second floor. (Unless they have a disability and couldn't make it)? If the levee fails is the city of Saint Helena responsible? The cost of a failure could cost millions!! If the city is responsible for cost of damage shouldn't all current home owners be notified of potential liabilities? I have been told the City of Saint Helena is responsible for the maintenance of the levee does anyone working for the city have experience or training on levee maintenance? 17-1

Sent from my iPhone

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Response to Letter 17
Bernerd Buckley
October 26, 2021

17-1 The comment raises concerns related to potential levee failure. Specifically, the commenter is concerned with emergency evacuation in the event of levee failure for those with a disability and the cost of levee failure. The comment also states that future homeowners should be notified of potential liabilities related to the levee. is addressing concerns regarding the levee and raises FEMA certification of the levee.

Please see Master Response 3 that addresses concerns associated with the levee and Master Response 1 that addresses emergency evacuation.

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Comment Letter 18

-----Original Message-----
From: Bernerd Buckley <bernerdbuckley@gmail.com>
Sent: Tuesday, October 26, 2021 6:45 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>; Paul Dohring <PDohring@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>
Subject: [External] Hunter project

Almost all affordable housing is located east of Main st. About 40% of that housing is located on Hunt st. to Starr ave. The Monte vista apartments and Hunts Grove being the largest. There also senior affordable housing at the Woodbridge property.
The families who live in these homes are forced to park blocks from their homes because the properties were built with inadequate parking. There will be 50 cars parked on the street, from the path Hunt st to Adams st, on Grove ct, Monte Vista, Hunt st, Starr ave and Meadowcreek Cir. The additional proposed 25 affordable homes will between the Monte Vista apartments and Hunts Grove. This will increase the number of affordable homes in that area to over 40%. and additional parking problems. This Hunter project has a real negative effect on these people of limited resources in the area. The Hunter development only benefit the developers not the current residents of Saint Helena.
Sent from my iPhone

18-1

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Response to Letter 18
Bernerd Buckley
October 26, 2021

18-1 The comment expresses a concern regarding Project's impact to parking availability.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements.

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Comment Letter 19

-----Original Message-----
From: Bernerd Buckley <bernerdbuckley@gmail.com>
Sent: Tuesday, November 2, 2021 2:36 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Paul Dohring <PDohring@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>; Paul Dohring <PDohring@cityofsthelena.org>; Geoff Ellsworth <GEllsworth@cityofsthelena.org>; Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter development

Looking at the location of affordable low income apartments in the Hunter proposed project, why are they directly behind the low income apartments on Monte Vista? Is it because all the low income apartments should be segregated from Market rate homes?

19-1

Sent from my iPhone

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Response to Letter 19
Bernerd Buckley
November 2, 2021

19-1 The comment expresses concern related to the proposed location of low-income housing. The commenter questions the appropriateness of the proposed location of these residential units.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the commentor believes the Draft EIR is inadequate; therefore, no further response is required. As described in Chapter 2, Project Description, prior to any development on the site occurring, additional discretionary approvals including a requirement that the Project applicant have an Affordable Housing Agreement approved by the City Council prior to Final Map recordation.

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Comment Letter 20

-----Original Message-----
From: Bernerd Buckley <bernerdbuckley@gmail.com>
Sent: Tuesday, November 2, 2021 2:58 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Paul Dohring <PDohring@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>; Geoff Ellsworth <GEllsworth@cityofsthelena.org>
Subject: [External] Hunter project

The DEIR says that a breach of the levee is unlikely but if it happened properties behind it could have 5 feet of water damage. The top of the levee has many pot holes some have been repaired with gravel is this correct material? Do maintenance people have experience or training on levee's?

20-1

Sent from my iPhone

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Response to Letter 20
Bernerd Buckley
November 2, 2021

20-1 The comment letter expresses concerns related to the levee, including the event of a breach, water damage from a breach, the condition and material of the levee, and experience of levee maintenance professionals.

Please see Master Response 3 that addresses all concerns associated with the levee, including the event of a breach and the condition, material, and maintenance of the levee.

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Comment Letter 21

-----Original Message-----
From: Bernerd Buckley <bernerdbuckley@gmail.com>
Sent: Monday, November 29, 2021 1:42 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter

Can you explain the way DEIR says the 333 housing retrofits can off set 87 water consuming households. How many people do they assume will be in the new housing? Are there other communities the size of Saint Helena that have done this? Can you document the towns and results? 21-1

Sent from my iPhone

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Response to Letter 21
Bernerd Buckley
November 29, 2021

21-1 The comment expresses concern over the City's water supply and the effectiveness of the City's Water Neutral Policy. The commenter questions the number of new residents assumed for the Project and asks if there are other projects that have implemented similar water-saving measures.

Please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code. As stated on page 3.13-24 of the Draft EIR, a Water Neutral Report was prepared for the Project that assumes a higher persons per household or PPH rate as compared to the City's PPH assumptions to conservatively estimate Project population to calculate water demand. See Responses to Comments 7-3 and 7-4 that address the PPH assumptions to evaluate Project impacts.

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Comment Letter 22

-----Original Message-----
From: Jeff Burton <jefftburton@yahoo.com>
Sent: Monday, November 8, 2021 8:50 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision

Maya DeRosa
St. Helena City Planning Department

We are writing you to express our opposition to the Hunter Subdivision Project. We are not opposed to more housing to relieve the general housing shortage in St. Helena, but if this project goes forward we ask why such an imbalance of "affordable" living is being bunched around the east side of our town? I'm sure the west side offers available space. In fact, I'm sure future residents who will live in these homes would appreciate living amongst general neighborhoods as opposed to being clustered and corralled into one confined "project" area in a flood zone. 22-1

I'd like to express our thoughts on a few key issues:

We are on the tipping point on water resources. If one adds up the water needed to be allocated to this project, I ask from where is this resource is going to come from? 22-2

We all know traffic is at a breaking point, just look at what the temporary closure of Silverado Trail did to the already crowded streets of St. Helena. Now, add in the additional cars which will compete for road space and the already inadequate parking situation. 22-3

What's more, there is a popular walking path that looks like it will be terminated without an alternate path. 22-4

Another consideration is the likelihood of another 100 year flood. Who is going to be held liable for damage and injury? 22-5

We fear that if the Hunter Subdivision is approved the Adam Street property will have developers lining up once again to make their proposals. We are concerned about the future of St. Helena if this project is approved. 22-6

We urge you to consider all these issues and vote down the proposal for this new housing project. 22-7

Respectfully,

Jeffrey Burton and Maureen Moulton

Sent from my iPad

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Response to Letter 22
Jeff Burton
November 8, 2021

22-1 The comment expresses opposition to the Project due to their opinion that affordable housing should not be confined to the east side of the City and in a flood zone.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

As noted elsewhere in these Responses, the Project site is not located in a flood zone which would preclude residential development.

22-2 The comment states that the City is limited on water resources and inquires about the source of water to serve the Project.

Please see Master Response 2 that addresses the issue of water supply.

22-3 The comment states that the Project would result in additional traffic congestion and that the parking situation in the City is inadequate.

The adequacy of parking supply and traffic congestion is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements.

22-4 The comment states that a popular walking path would be terminated by the Project without establishment of an alternate path.

The Project does not propose removing the existing trail or levee maintenance road, as explained in Section 3.12, Public Services and Recreation on page 3.12-17. The comment does not identify specific areas where the commentor believes the Draft EIR is inadequate; therefore, no further response is required. Please see Chapter 3, Changes to the Draft EIR for a copy of a trails map that shows the existing trails near the Project site.

22-5 The comment asks who would be held liable for damage and injury in the event of a 100- year flood.

Determining legal liability for a potential future event is not within the scope of CEQA review; therefore, no further response is necessary

22-6 The comment states that approval of the Project would attract other proposals to develop the Adams Street property and expresses concern about the future of the City.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

22-7 The comment urges the City to consider the issues raised in the comment letter and to reject the Project.

The comment's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

Comment Letter 23

-----Original Message-----
From: Lynda Burton <burtonfamilylaw@gmail.com>
Sent: Sunday, October 31, 2021 1:08 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Cc: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Dear Sir/Madam,

I write to register my grave concerns with and opposition to the proposed Hunter Project. 23-1

While there are many reasons to oppose the project, my primary concern is the project's impact on our extremely limited water supply. Their proposed mitigation measures seem laughably inadequate, especially given the project's long term impact on the city's water consumption. 23-2

Our need for affordable housing can be better met by smaller, specifically targeted projects for seniors and lower income families. 23-3

Sincerely,

Lynda M. Burton
Attorney at Law (Retired)
1501 Allyn Avenue
St. Helena, CA 94574

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Response to Letter 23
Lynda Burton
October 31, 2021

23-1 The comment states general opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

23-2 The comment raises concerns related to the Project's impact on the City's water supply and generally challenges the Draft EIR's proposed mitigation measures.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the mitigation measures in the Draft EIR; therefore, no further response is required. However, please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

23-3 The comment acknowledges the need for affordable housing and calls for smaller-scale projects that are aimed to serve senior citizens and low-income families.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

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Comment Letter 24

-----Original Message-----
From: Calie Candia <caliesworld@aol.com>
Sent: Monday, November 1, 2021 2:27 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter subdivision.

To whom it may concern,

As a resident of Vineyard Valley, I am concerned about this property being developed. The fact that it's going on a flood plane could impact our whole park if a flood should take place. And it seems that nobody wants to take responsibility if it does flood. The army Corp of engineers have done their job building the levee and they are done. The builder won't and can't guarantee it won't flood, and what is the city guaranteeing? Not only that but we have a serious water problem in our county. Not to mention the traffic impact to Pope street, the trail, and Main Street. 24-1
I strongly oppose the proposed development. 24-2 24-3

Sincerely,
Calie Candia
Sent from my iPad

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Response to Letter 24
Calie Candia
November 1, 2021

24-1 The comment expresses general concern over the property being developed. More specifically, the commenter is concerned about potential impacts to the floodplain in the event of a flood and stability of the levee.

Please see Master Response 3 that addresses City liability in the event of a flood and concerns related to the levee.

24-2 The comment raises concerns regarding traffic along roadways within the City.

Please see Response to Comment 10-2 that address general traffic concerns.

24-3 The comment states general opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 25

-----Original Message-----
From: BERT CASTEN <bertcasten@aol.com>
Sent: Saturday, October 30, 2021 2:37 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter st

I have been taking kids and adults to walk behind the library for years. Access to the river is so much fun. 25-1
Please do not let Hunter Subdivision Project take our open space/ access to river away.
Thank you
Bert Casten 1830 Adams st

Sent from my iPhone

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Response to Letter 25
Bret Casten
October 30, 2021

25-1 The comment states that the commenter frequently uses the adjacent trail and expresses concerns over trail and open space access.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Regarding the trail, as noted in the Draft EIR in Chapter 2, Project Description, there is an existing City trail located in the northside of the levee maintenance road. A small portion of the levee maintenance road would be paved to accommodate construction of the Adams Street extension, but sidewalks would be provided along the extension of Adams Street to provide a safe connection to the remainder of the maintenance road and the pedestrian trail, which would remain unaltered by the Proposed Project. Please see Chapter 3, Changes to the Draft EIR for a new figure showing the adjancent trails.

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Comment Letter 26

From: Deanna Caudill <dl.caudill10@gmail.com>
Sent: Saturday, November 6, 2021 8:22 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Project on Adam

Keep our city small and safe!!!
Deanna L Caudill

Sent from Mail for Windows

26-1

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Response to Letter 26
Deanna Caudill
November 6, 2021

26-1 The comment expresses a desire to keep the City safe and small.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 27

From: bobchilds@aol.com <bobchilds@aol.com>
Sent: Saturday, November 6, 2021 11:43 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Good day!

We, too, are concerned about the proposed project. While we, more than many, appreciate the need for additional and affordable housing, we do not believe this project is the way. 27-1

Water is paramount, we are already short of the precious material, the addition of the number of proposed homes will severely be negative. The sewage addition, will also be a great negative to the Vineyard Valley neighborhood, where we live, which is already at the limit. The additional homes, will be a strain (at least) to the current levy (if altered) on the flood zone which this property has been protected by it and the "seawall" installed in the last few years. As well, the levy is an additional "escape route" for our neighbors, all of whom are over 55, in the event of fires, floods, etc. 27-2 27-3 27-4

Please add our names to the list of folks objecting to this project. 27-5

Thank you, in advance.

Bob Childs
Nancy Carlson
2 La Canada Ct
SH 94574
707.968.5294

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Response to Letter 27
Bob Childs and Nancy Carlson
November 6, 2021

27-1 This comment expresses general opposition over the Project, while acknowledging the need for additional affordable housing.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

27-2 The comment states a concern over Project's water usage and impact on water availability.

The commenter's concern is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

27-3 The comment expresses concern over the Project's impact on the City's sewer capacity.

The commenter's concern is noted and forwarded to the decision makers for their consideration. As described in Section 3.13 of the Draft EIR, the Proposed Project would not exceed the City's current permitted wastewater treatment plant capacity; also, pursuant to Municipal Code Section 3.32.020, the City collects development impact fees on new development to pay for public improvements related to sewer projects. The Project applicant would be required to pay these fees, which would help fund upgrades and improvement to the City's sewer system.

See also Master Response 4 that addresses concerns regarding the City's sewer system.

27-4 The comment expresses a concern regarding the current condition of the levee and the impact the Project would have on it related to the floodplain and emergency evacuation.

Please see Master Response 3 that addresses City liability in the event of a flood and concerns related to the levee and Master Response 1 for further information on emergency evacuation.

27-5 The comment requests that the commenter be added to the list of public members opposed to the Project.

The commenter has been added to a list of interested public members to receive notices regarding the Project; however, this list does not distinguish those who support or oppose the Project.

Comment Letter 28

From: Robb Cohen <cohen.robb@gmail.com>
Sent: Monday, November 1, 2021 3:45 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: Re: [External] Proposed Hunter Street Subdivision

To Whom it may concern:
I am a resident of Vineyard Valley and hereby join with over 200 park residents in registering my opposition to the above-referenced subdivision. 28-1
As a former attorney and builder/developer with over 35 years experience with large-scale residential developments, I believe the proposed project is ill-advised and fraught with a host of potential developmental and legal problems. I am particularly concerned that the city of St Helena would even consider such a large-scale development in light of the persistent drought and the resultant water restrictions that have already been imposed on the residents of St Helena in response to the water shortage. This project, should it be approved, will only exacerbate the existing water restrictions/ shortages and concomitant penalty provisions that have already been imposed on drought-weary city residents. Furthermore, should the subdivision be approved, the risk of building on a flood plain will subject the city to numerous and costly lawsuits, which will inevitably ensue. Given the well- publicized financial difficulties the city has experienced in recent years, the idea that the city would even consider approving this project strikes me as being extremely ill-advised. Additionally, I would expect that should the project be approved, it will expose city officials to legal challenges for claims of misfeasance and malfeasance, which will undoubtedly be costly to defend. 28-2 28-3 28-4
I have purposely omitted any references to the many other allegations and concerns that have already been articulated by the hundreds of St Helenians who have already written in opposition to this project.
I pray that the city council will reject the proposed Hunter subdivision.
Sincerely,
Robb A. Cohen
P: 703.405.1307
cohen.robb@gmail.com
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Robb A. Cohen
P: 703.405.1307
cohen.robb@gmail.com

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Response to Letter 28
Robb Cohen
November 1, 2021

28-1 The comment expresses general opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

28-2 The comment states that the Project would exacerbate existing water supply problems in the City.

Please see Master Response 2 that addresses concerns associated with the adequacy of water supplies.

28-3 The comment states that the risk of building on a flood plain will subject the City to numerous lawsuits.

Determining legal liability for a potential future event is beyond the scope of CEQA and is not required to be evaluated in an EIR; therefore, no further response is necessary.

28-4 The comment states that the Project should not be approved and suggests that approval of the Project would subject the City to legal challenges.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 29

From: Joseph Cole <josecole134@gmail.com>
Sent: Saturday, October 30, 2021 2:49 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Looking southwest from Carpenter Ranch. across the wide open expanse, Vineyard Valley mobile home park was there. Hunt street Apts. nope! Starr ave (didn't exist) Hunt Ave. dead ended a little past Monte Vista. I am a newby, here. Been transplanted desde Socal (1983). Married born and raised home grown Saint Helena girl: Misty Sagadin. Our two sons are grown men. (oh, yeah. They, too, born/ raised here. I left southern California and have experienced this incredible upper valley. Hunter Project is going to serve only a few. the reality of what it's fruition will harvest a self- inflicted disregard for the wonder a rural community experiences. Don't do that.

29-1

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Response to Letter 29
Joseph Cole
October 30, 2021

29-1 The comment letter expresses general opposition to the project and provides anecdotes about the commenter's experience as a resident of St. Helena.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 30

City of St Helena, City Hall
Received
OCT 26

October 25, 2021

1480 Main St.
St Helena, CA 94574

Members of Planning Commission and City Council

Re: Hunter Project

I am enclosing one of the best articles written on the St Helena dilemma of the Hunter Project. I could wax eloquently on all the issues with this project, but a review of the article written in 2016 by Nicholas Pinter, Professor of Watershed Sciences at UC Davis really encapsulates the flood and water issues with this project. Nothing has changed since 2016. Yesterday's rains should highlight these issues. The river rose from a dry creek bed to 14 ft in a matter of hours. 30-1

We talk of about 100 year flood plains without really understanding the mathematics and probability of this number. You can at least understand that this does not mean we cannot have a catastrophic flood tomorrow. Houston is in a 500 year flood plain and they have had 3 catastrophic floods 3 years in a row.

We also have the issues of not putting another bridge across the Napa River, the high traffic problem and the proposal for water mitigation by providing better flush toilets which is seemingly idiotic. 30-2

The Hunter project is a no go for the citizens of the St Helena. They made that perfectly clear 6 years ago. The council and commission must: 30-3

1. Review this article and articulate why these issues are still not real
2. Get a written letter from FEMA that they would cover another flood on this land
3. Guarantee that the City would not be liable for further flood issues if housing is built here
4. Have a legitimate proposal for traffic control without building another bridge 30-4
5. Come up with a better water mitigation plan. We have been on Stage 2 water conservation. We cannot ask the citizens to save more to build this ill conceived project. 30-5

The Hunter project is too big a risk to leave it to a brief meeting and the votes of a few commissioners and the city council. This is a huge risk to the city which needs greater in person debate. Zoom doesn't do it. 30-6

Arlene and Richard Corsetti

1401 Spring Street

St Helena, CA 94574

California WaterBlog
A biologist, economist, engineer and geologist walk onto a bar...

St. Helena, California: Dealing with a Field-of-Dreams Levee, Residual Risk, and a Flood of Controversy

Posted on July 17, 2016 by UC Davis Center for Watershed Sciences

by Nicholas Pinter

A new $37.2[1] million levee in the town of St. Helena, on the floodplain of the Napa River, has a colorful history and has been stirring local acrimony since its inception. This project illustrates both the attraction of levee protection, in this case protecting a low-income neighborhood ("low income" by Napa standards) hit by disastrous flooding in 1986 and again in 1995, as well as pitfalls of this strategy for long-term risk management. There are clearly positive elements of the St. Helena levee project, but also numerous missteps that have mired the project in dissent and even, opponents argue, threaten to bankrupt the town. With important planning and zoning decisions now pending, the St. Helena levee is a case study for other communities to examine before they consider all of the options for flood-risk management.

After the release of a recent journal article on levee protection, one reporter tried to wake me up with the following opening question – "Prof. Pinter, why do you hate levees?" I laughed in appreciation of a good icebreaker, and then explained how levees, floodwalls, and other structural protections are valuable tools in a diverse toolkit used to manage flood risk. But levees also come with adverse consequences that need to be rigorously evaluated and balanced against their potential benefits. Those negative impacts and the need for careful evaluation are often lost in the rush to build new levees or enlarge existing structures, typically in the aftermath of a damaging flood.

St. Helena is a town of about 6,000 people along the Napa River about 20 miles upstream of the City of Napa. The river there is small, averaging just 46.7 cubic feet per second (cfs) of flow over the duration of record, but subject to flash flooding after intense local rainstorms. Since 1862, 28 major floods have struck the Napa Valley[2], including 1955, 1963, 1967, 1973, 1978, 1981, 1983, 1986, 1993, 1995, 2002, and 2006. Most of St. Helena is located a safe distance from the river, but starting in the 1970s, the Vineyard Valley area was developed, including 468 homes, apartments, and mobile homes at risk of flooding[3]. Most of these are in what is now mapped by FEMA as the so-called 100-year floodplain. During the five-year review process for development of the mobile home park, local residents report that the issue of flood risk was never raised.

Figure 1 – The Vineyard Valley neighborhood of St. Helena under water during the 1986 flood.

Intense rain events hit the upper Napa Valley in February of 1986 and again in March of 1995, sending the Napa River over its banks and into the new Vineyard Valley development. Damages in each event were estimated at over $50 million in St. Helena alone. During the 1995 flood, over 400 residents of St. Helena were evacuated, and 200 mobile homes in Vineyard Valley were declared a total loss. In both 1986 and 1995, other communities such as Calistoga and Yountville also were hard-hit, including inundation of much of downtown Napa. As described by the Napa Valley Register, *"Overnight, the Napa River*

swelled from a modest tributary of San Francisco Bay to a wrathful Amazon." The 1986 flood killed three people, forced the evacuation of over 2,500, and caused total damages estimated at $100 million[2].

A typical pattern in flood response is that it takes a one-two punch to motivate any large-scale action to address flood risk. The 1995 flood in Napa was that second punch. Surveying the damage, Napa County officials dusted off a flood-control plan initially drafted by the Corps of Engineers but defeated by a voter referendum in the 1970s. The original Corps flood control plan was considerably reworked and, particularly in the City of Napa, many forward-thinking elements were added, including channel habitat preservation and reconnection of the historic floodplain. Flood control was now put to the voters again, in the form of Measure A, a half-percent county sales tax, which was passed in March of 1998 with a two-thirds voter majority. With local cost-share funding secured through the referendum, Napa County began moving forward with the large-scale flood plan in Napa, with smaller portions of the funding apportioned to other communities along the river.

In St. Helena, plans were drawn up that focused on a large levee and floodwall to protect the Vineyard Valley area, as well as several other elements. These other elements of the project included bank stabilization, removal of a channel constriction, internal stormwater management, and excavation of a storage area outside the levee (a "terrace," the project calls it) planted in native vegetation. The channel restriction, for example, involved the removal of 17 mobile homes and the associated land closest to the river, which opened that area to better pass flood flows. This bend in the river channel represented a chokepoint during floods, significantly obstructing flow and raising water levels in that area and upstream. Removal of these homesites and augmenting the conveyance capacity of the channel at this chokepoint certainly lowered flood danger by both reducing at-risk infrastructure and by lowering water levels during future floods.

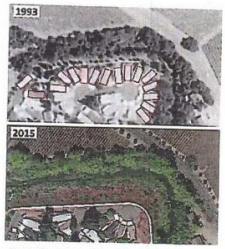

Figure 2 – The positive side of flood control. As part of the St. Helena project, a total of 17 mobile homes were permanently and the flood wall set back from the river.

Although the St. Helena project included several forward-thinking elements, it remained much more of an "old school" structural flood-control plan than what was implemented in Napa. The St. Helena plan centered on approximately 2,000 ft of floodwall surrounding the Vineyard Valley mobile home park and another ~2,000 ft of levee that extends from the floodwall to the north and west. As now required of urban levees in California, the system protects to the "200-year" level – that is, designers of the levee and floodwall have affirmed that they will keep out floods up to those with a 0.5% chance of occurring in any year.

On a map the St. Helena levee is relatively small, a tiny fraction of the length of the systems that protect the Central Valley or great alluvial floodplains of the Midwest. But its height is impressive. Standing on the new levee crest above the Napa River, one can almost imagine looking out on the Sacramento or Mississippi River. The levee is also proportionally wide, with a crest 15-20+ feet across, wide enough to meet requirements for much larger rivers and floodplains. Wide enough, in fact, to carry two full lanes of traffic. Indeed, the initial St. Helena planning documents[4] called for a multi-function levee that would also serve as a new roadway. This new road would have crossed the floodplain and the river across a new bridge, connecting St. Helena to the Silverado "wine trail" on the northeast bank. Currently that connection is across the Pope Street bridge, a historic stone structure built in 1894 and so narrow that it is terrifying to cross even when the driver coming the other way hasn't spent

the afternoon sampling the latest vintages. Using flood-control funding to simultaneously serve another goal might not be illegal, but it raises questions about priorities in design details. In this case, the proposed bridge link was rejected after litigation focused on its environmental impacts, but before levee construction. Nevertheless, the width of the St. Helena levee retained the width of a road to nowhere, as well as – importantly – a path that took the levee far wide of the housing it was funded to protect, enclosing a broad swath of floodplain undeveloped and empty except for rows of grapevines. More on this in a moment.

Another interesting aspect of the St. Helena levee is the funding to plan and design the project. The city obtained an $8 million grant from FEMA's Hazard Mitigation Grant Program (HMGP). HMGP uses a slice of FEMA's total disaster-related funds to promote "mitigation," meaning actions taken by communities to lower their overall exposure to future disasters. Flood-mitigation strategies favored by FEMA nationwide include buyouts and relocation of repeatedly flooded homes or elevation of floodplain structures up beyond the reach of future floods.

FEMA carefully monitors HMGP projects to make sure that taxpayer funds are used for their intended purpose. In 2013, when FEMA audited St. Helena, the city was unable to account for a large block of HMGP money. Among project expenditures, the city had spent $1.64 million on lobbying expenses, reportedly including lavish entertainment expenses in Washington aimed at securing Army Corps of Engineers and other federal funding for levee construction. When FEMA reviewed the city's books, it disallowed $1.9 million in expenses, requiring St. Helena to withdraw this amount from its operational accounts. Further local acrimony ensued because the city repaid the FEMA money without adequately, some argue, disclosing the financial missteps and the resulting impacts on city finances. This repayment resulted in a $1.5 million budget deficit and significant cuts to city services.

The details above are a selection of the complaints voiced by local levee opponents in St. Helena. This dissent contrasts with the broad consensus surrounding the much larger flood-control measures implemented in the City of Napa. Large public projects never reach perfect consensus, but the Napa Project solicited input from a broad range of stakeholders and integrated these opinions in final project designs. In contrast, the St. Helena project continues to roil that community even now that the levee is complete and a done-deal.

The final shoe – probably the most problematic element of the St. Helena flood-control debate – is now dropping, five years after the levee's completion. The current issue results from the unusual pathway of the levee, which sweeps well north and west of the neighborhoods previously flooded and includes 16.9 acres of undeveloped vineyard land. Undeveloped until now, that is. Just 17 days before the passage of Measure A, the mechanism that funded large-scale flood engineering throughout Napa County, much of the empty floodplain land behind the St. Helena levee was purchased by a private developer. On Sept. 8, 2010 the developer submitted plans to convert the empty agricultural land behind the levee into high-density residential development, including 87 new residential units[5]. This despite an explicit provision in Measure A that "none of these projects are intended or designed to encourage population growth."

My research group has worked hand-in-hand with floodplain residents to provide them planning guidance and technical expertise. We've also studied levee projects that would increase flood heights for neighbors, increase long-term flood risk, or degrade habitats, sometimes in exchange for very limited local flood-protection benefits. After struggling with this balancing act time and again, we've proposed a **three-step "levee sniff test" to preliminarily judge any proposal**. New or enlarged levees and floodwalls may be an appropriate solution if the system is designed to protect floodplain infrastructure that is:

1. *concentrated,*
2. *high in value, and*
3. *pre-existing.*

The most crucial – and often the most politically fraught – of these criteria is the third. The worst case is construction of "field of dreams" levees – new, expensive, often muscular levees surrounding undeveloped or sparsely occupied floodplain land. "Build it and they will come" – field-of-dreams levees are meant to attract new construction and development on the floodplain. Political leaders see expansion of their local tax base, and developers salivate over the prospect of transforming low-cost floodplain land into urban real estate as soon as the new levee "solves the problem of flooding forever."

Figure 3 – The Levee Sniff Test

By intent or by accident, the St. Helena project created a "field of dreams" levee. The original position of the levee was set by the desire of the city to piggyback a long-sought transportation project onto available flood-control funding. A private developer saw an opportunity for windfall profits and snapped up this floodplain acreage. What remains unclear is why, when plans for the roadway were scrapped, did St. Helena not downsize its levee? Local levee opponents see nefarious motives here, and the optics are not good. In 2008-2009, local residents had proposed several possible levee alignments that hugged the edges of existing neighborhoods that needed protection. These alternatives would have eliminated the "field of dreams" issues, cut construction costs, and would have significantly reduced future flood levels for neighboring properties outside the levee. But these alternatives were rejected at the April 14, 2009 meeting of the City Council. Why? Perhaps simply a result of frustration at the grassroots opposition and the desire to move forward with the existing blueprint, however much conditions had changed since those plans were drawn up.

> *"Residual Risk – the small but real possibility that a levee may fail or be overtopped during future floods."*

So past mistakes aside, why not fill in every square inch of land behind a levee once you've got one? The problem with levees, and with field-of-dreams levees above all, is that no type of structural flood protection can ever reduce the flood risk to zero. Even the strongest levee or floodwall carries a "residual risk" of failure or overtopping during large floods. Furthermore, having flood waters pour over or burst through a tall barrier turns the gradual process of floodplain inundation into a much more violent, dangerous, and damaging event. The history of occupation of U.S. floodplains is a history of levee failures, with headlines almost every year bringing footage of disastrous levee failures somewhere in the country. One levee system on the Mississippi River, not an atypical one, was breached 14 times through its history, only to be patched and raised each time, in the process driving up flood levels for the next event and contributing to the next failure. Expert after expert, blue ribbon panel after panel, has implored engineers, local leaders, and floodplain residents to not forget about residual risk. Brig. Gen. (Ret.) Gerald Galloway, former commander of the US Army Corps of Engineers puts it this way, "Let no one believe that because you are behind a levee, you are safe" (Galloway, 2005). The point has also been made more bluntly, "There are two kinds of levees ... [t]hose that have failed and those that will fail" (Martindale and Osman, 2010).

"Developers and home builders may be gone, but residents of Natomas will be there and are the ones who are rolling the residual-risk dice year after year."

Neglecting residual risk of flooding behind levees creates a false sense of security for residents and a lunatic calculus in which the local community can find itself with far greater long-term flood risk than before the levee was built.

California has made these mistakes before. In fact, the leading example of a "field of dreams" levee, discussed in floodplain management circles around the world, is Natomas on the northwest side of Sacramento. The Natomas Basin is ringed by 42 miles of levees, encompassing approximately 53,000 acres of the floodplains of the Sacramento and American Rivers. This land was sparsely populated until roughly 1990. Despite a tangled history, the Natomas system was built and they did come. On-going levee construction, particularly improvements initiated in 1992, ushered in a wave of development. As of 2010, Natomas was home to over 22,800 structures, the large majority of them residential units and home to more than 90,000 people[6]. The City of Sacramento currently plans to permit up to 1,000 additional single-family homes per year, 500 multifamily residential units per year, and unlimited industrial, commercial, and retail construction behind this levee[7]. Today, total property in Natomas at risk of flood damage, should the levee fail or be overtopped, exceeds $8.5 billion, with flood depths that could reach 25 feet[8]. Heroic efforts are now underway by the Sacramento Area Flood Control Agency, the California Central Valley Flood Protection Board, and the Corps of Engineers to patch deficiencies in the Natomas levee and raise the overall protection provided by the system. When that huge – and hugely expensive – effort is complete, the State of California, the Corps, and FEMA will sign off that they have reduced the statistical chance of catastrophic flooding in Natomas to 0.5% per year (less than once every 200 years, on average). That is a high level of protection by US standards, and engineers and leaders who are implementing the project will be justifiably proud of their accomplishment.

But ... our country's 400+ year history with levees also tells us that such claims of almost complete flood protection have often been repeated, and almost always were over-stated. Lots of reasons why this has happened in the past, and many of those reasons hold true for the future. But even at face value, a 0.5% exceedance probability for a system now protecting $8.5 billion in property translates – crudely – into up to $42.5 million in risk each year. If those 22,000+ homes and other structures had already been there before the levee (concentrated, high-value, and preexisting), then this annual $42.5 million in residual risk would have been a necessary tradeoff. But because Natomas was a field-of-dreams levee built intentionally to create new floodplain infrastructure, the large majority of this $42.5 million/year is all-new and added risk.

Who bears this residual risk if (some would say "when") California's drought turns to flood and hands us a ">200-year flood?" Or a lesser flood that finds a chink somewhere in the 42-mile long, gopher-prone armor that surrounds Natomas? Developers and home builders may be gone, but residents of Natomas will be there and are the ones who are rolling the residual-risk dice year after year. So too are all US taxpayers, since we bankroll disaster relief. Federal expenditures for disaster relief have averaged ~$35 billion per year in recent years[9], equivalent to about $400 per year per US household.

Residual risk also can be borne by the governmental agencies that facilitate "field of dreams" levees. Legal liability came to roost in California in 2003, when the Court of Appeals found the state liable for $500 million in damages resulting from a levee break on the Yuba River in February of 1986, the same storms that flooded St. Helena. The case was Paterno v. State of California, and although the state neither built nor maintained the levee that gave

way, the court found that it was responsible for inadequate maintenance and management of the system. And liability extends to counties and towns as well; for example, California Assembly Bill 80 made local jurisdictions liable for "property damage caused by a flood [if they] ... unreasonably approv[e] new development in a previously undeveloped area[10]." In the Paterno case, the financial hit of that $500 million decision shook the financial structure of the entire state, such that California was forced to borrow funds from Merrill Lynch in order to pay the claims against it[11].

So where does St. Helena and its levee fit into this broader picture? This levee and the new construction proposed behind it are tiny compared to what has gone onto Sacramento area floodplains, St. Louis floodplains, Houston floodplains, and others. But the principles are the same, and the potential consequences for a small community like St. Helena are proportionally even more threatening than for a large city. The St. Helena Vineyard Valley levee was built to protect residents who had the misfortune of living in a neighborhood built on the edge of the Napa River and far into the floodplain, a neighborhood that should not have built in the first place. That was certainly mistake number one. But after repeated and devastating floods, those residents were justified in seeking a mitigation solution. The second crucial misstep occurred in 2009, when the city approved a levee map that enclosed a large area of floodplain empty except for rows of grapevines. Whether by nefarious purpose or just fatigue, St. Helena opened the door to the crucial and difficult decision now in front of them – whether to bow to the pressure and temptation of approving development of that empty land behind their levee.

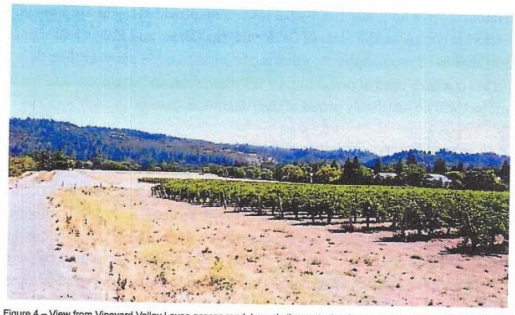

Figure 4 – View from Vineyard Valley Levee access road, towards the east, showing current conditions of the proposed development area. Figure IV.A-3a in Hunter Valley Subdivision Project, Draft EIR, Dates 5/29/2012.

One concern certainly on the minds of St. Helena city leaders is the threat of litigation if they deny the development plans in front of them. When such cases go to court, plaintiff lawyers typically cite the Fifth Amendment of the US Constitution, which states that "private property [shall not] be taken for public use, without just compensation." The legal claim is that refusal to allow development of the owner's land constitutes a "takings" of the value of that land. The St. Helena situation is typical of many examples where the legal threat of a takings claim is used to thwart zoning or planning to manage flood risk and other natural hazards. Developers and their lawyers argue that zoning to prevent development is unjustified, arbitrary, and an infringement of the rights of landowners. On the contrary. The St. Helena developer purchased agricultural land in a floodplain at a price consistent with those conditions. Despite the construction of a levee at taxpayer expense surrounding that

land, it remains a floodplain. The limitation on building expensive homes and apartments on that floodplain is imposed by nature, not the City of St. Helena.

Fear of lawsuits and potential liability is a tangible pressure on a town like St. Helena. But in considering development of floodplain land behind a field-of-dreams levee, these communities are perhaps looking at the lesser threat. Bowing to the will of the developer dodges a likely "takings" lawsuit, but loads St. Helena with new residual risk – risk that is small as an annual percentage, but large in total magnitude. The mean value of a detached home is St. Helena is $640,000 and an attached unit is $401,000[12]. Given current plans for 51 new single-family homes, 11 granny units, 24 multi-family units[2], and a typical value of 50% content damages for flood-loss estimates, these 87 new units could suffer $49 million in damages if that area were inundated. After the 1995 flood, residents of Vineyard Valley sued the City, and residents of the proposed new development could take the same action. The 2003 Paterno decision against California amounted to just 0.5% of the state's total budget that year. For comparison, the City of St. Helena, with revenue to its general fund of $10.5 million in FY 2015/16, could face a financial hit totaling 469% of its annual resources. In other words, the legal liability from the proposed new development could bankrupt the city nearly five times over.

> *"The legal liability from the proposed new development could bankrupt the city nearly five times over"*

St. Helena was founded in the mid-1800s, near enough the Napa River to gain the benefits of that proximity, but up and off the floodplain. However beginning in the 1970s, the town suffered the same magnetic pull as countless other communities across the US – succumbing to pressures for growth and the attraction of empty land ever closer to the river. Located deep in the Napa River floodplain, the Vineyard Valley neighborhood was reviewed and approved, reportedly without even discussing the possibility of flooding. This was an oversight for which residents paid dearly in 1986 and again in 1995. Mistake followed mistake: land that never should have been developed, an expensive levee that has already sent the town into financial distress and political discord, and a levee map that somehow enclosed much more floodplain land than the neighborhood it was designed to protect. St. Helena now has a last chance to bring this cascade to an end and avoid construction of 87 new homes behind their field-of-dreams levee. Floodplain managers, river scientists, and prudent leaders worldwide counsel that levee protection is never absolute, and that even the tallest and strongest wall comes with an inherent residual risk, a small but real possibility that it may fail or be overwhelmed during future floods. For concentrated and existing floodplain infrastructure, levees can be the right solution, and residual risk preferable to no action at all. But towns like St. Helena should understand that levee protection brings a range of consequences, including the possibility of multiplying, not diminishing, the long-term risk of damage and potentially even loss of life in their community.

Nicholas Pinter is a professor in the Department of Earth and Planetary Sciences and an affiliate of the Center for Watershed Sciences. This article was developed with assistance from Megan Nguyen, a junior researcher at the Center for Watershed Sciences.

Further Reading

[1] Report to the St. Helena City Council, Council Meeting of January 26, 2016

[2] City of Napa. 2009. Hazard Mitigation Plan, 2009 update.

Response to Letter 30
Arlene and Richard Corsetti
October 25, 2021

30-1 The comment references a 2016 article written about flooding and water issues in the City and flood-loss damages in the event of a catastrophic flood event.

The comment does not identify any specific issues with the accuracy or adequacy of information provided in the Draft EIR; therefore, no further response is required.

Please see Master Response 3 that addresses the levee and flood concerns.

30-2 The commenter states their opinion on current issues including the lack of a second bridge across the Napa River, traffic problems, and the Project's compliance with the City's Water Neutral Policy.

The commenter's opinion does not identify any specific issues with the accuracy or adequacy of information provided in the Draft EIR. The Project's increase in demand for water is evaluated in Section 3.13, Utilities and Service Systems and traffic is evaluated in Section 3.14, Transportation and Circulation. The commenter's opinion on the need for another bridge across the Napa River is noted and forwarded to the decision makers for their consideration. Please see Master Response 2 that addresses the City's Water Neutral requirements.

30-3 The commenter states that the City Council and Planning Commission must review and refute the article referenced in Comment 30-1 (above), receive a letter from FEMA guaranteeing that another flood in the area would be covered, and guarantee that the City would not be liable for further flood issues if housing is built in the area.

The comment does not identify any specific issues with the accuracy or adequacy of information provided in the Draft EIR. Regarding the referenced article, please see Response to Comment 30-1 above. This comment is noted and forwarded to the decision makers for their consideration.

Determining legal liability for a potential future event is beyond the scope of CEQA and is not required to be evaluated in an EIR.

30-4 The comment raises general concerns for the City to consider specific to traffic congestion absent another bridge across the Napa River.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

30-5 The comment opines that the Project should have a better water mitigation plan because current City residents should not be asked to save more water than they currently are.

Please see Master Response 2 regarding City water supply and requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

30-6 The comment states an opinion that the Project is too risky to be left to the vote of Planning Commission and City Council. The commenter opines that the Project needs in-person debate rather than using the Zoom platform.

The City has recently returned to in-person Planning Commission and City Council meetings. During the COVID-19 pandemic, holding meetings virtually was consistent with Government Code Section 54953, as amended by AB 361, which authorizes teleconference meetings under the Brown Act during proclaimed states of emergency. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

Comment Letter 31

Response to Hunter Project Draft EIR Report

Hazards and Hydrology:

The Draft EIR does not adequately address the potential danger of a flood in this area due to climate change dynamics.
Replacing the currently available absorbing soil with homes and concrete augments flood danger.
When it floods, personal safety of Hunts Grove, Vineyard Valley, and Hunter Project residents would be hazardous. 31-1

Regarding the water neutrality issue in the DEIR, we are currently restricted in our use of water with no anticipated increase in our water supply. Paying into a fund to retrofit toilets does not provide more water and does not adequately mitigate estimated water usage by the Hunter Project. 31-2

Public Utilities:

Increased sewer flow from the Hunter Project would inevitably impact the currently inadequate sewer structure in Vineyard Valley. The DEIR does not adequately address this impact. 31-3

Transportation:

We believe the Hunter Project would negatively impact our Vineyard Valley evacuation plan. This has not been adequately addressed in the DEIR. 31-4

We are concerned the sizeable increase of vehicles on our Saint Helena roads will exacerbate traffic congestion, especially on Pope Street and the Pope Street Bridge. We believe this impact is sufficient to deny the Hunter Project. 31-5

Carroll and Ellen Cotten
1 Del Rio Court
Saint Helena

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Response to Letter 31
Carroll and Ellen Cotten

31-1 Without providing specific examples, the comment challenges the Draft EIR analysis of potential flood impacts due to climate change dynamics.

Because this comment does not provides specific criticism of the analysis, no response is possible. Please see Master Response 3 which provides a general response to concerns related to flooding and the levee near the Project site.

31-2 The comment takes issue with the effectiveness of the City's Water Neutral Policy and how it is used in the analysis of the proposed Project's water demand.

Adherence to the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code to fund such measures as fixing an existing leaking water conveyance pipe does offset demand by increasing water supplies compared to the existing conditions of water losses due to the leak. As a result, the Water Neutral Policy does offset new demands with measures that reduce demand elsewhere or otherwise increase water supplies. Therefore, compliance with the City requirements is an appropriate and effective measure to include in the analysis of the Draft EIR. See also Master Response 2.

31-3 The comment generally asserts that the Project would negatively impact the City's sewer system.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no response is required. Please see also Master Response 4 that addresses concerns regarding the City's wastewater system.

31-4 The comment expresses concern that the Project would negatively impact the emergency evacuation plans within the area.

Please see Master Response 1 that addresses concerns associated with emergency evacuation.

31-5 The comment expresses general concerns regarding traffic congestion in the City and along the Pope Street Bridge.

The comment does not identify any specific issues with the accuracy or adequacy of information provided in the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. The operational aspects of the Proposed Project that contribute to

delay and congestion on local roadways is no longer considered an environmental impact under CEQA. Please also see Response to Comment 10-2.

Comment Letter 32

Richard Crebs
10 San Juan Court
Saint Helena, CA. 94574
(707) 580-0418

November 2, 2021

Ms. Maya DeRosa, Planning & Building Director
City of Saint Helena
1572 Railroad Avenue
Saint Helena, CA 94574

Delivered via email to:mderosa@cityofsthelena.org

Dear Ms. DeRosa:

Generally, this is a fatefully flawed project projected upon a majority of fill generated from the construction of the flood control levee, subject to probable seismic events and/or flooding, exasperating demands on water we do not have and adding to almost daily traffic gridlock at commute time on the Eastside roads. This town would be better served leaving the land as open space for all to enjoy. 32-1

The following are my specific objections to the Hunter EIR.

3.9 HYDROLOGY AND WATER QUALITY Commencing on page 367)
The document sets forth in the Section **Flooding Due to Levee Failure or 200-Year Flood Event** (Page 374) propose mitigating the potential risk by suggesting that resident "will have the option of purchasing flood insurance (i.e., FEMA policy").

(Since the levee project was not certified by the Army Corp of Engineers it is my understanding that if it should fail the city would ultimately be responsible for all ensuing damages.)

Instead require the developer to Hold the City harmless in the case of any future flooding if the project is completed and require the developer to post an evergreen Fifty Million ($50,000,000) Surety Bond to support the "Hold Harmless" Agreement. 32-2

Anything less puts the city, and there for its citizens, at the risk of massive litigation of the Hunter Project should flood in the future. It is not the Cities or its citizens responsibility to be put at significant financial risk just so a developer can profit by develop an extremely questionable parcel with other multiple challenges such as water, sewer, and traffic concerns.

3.13 -Utilities and Service Systems
3.13.4 Impacts
Table3.13-9 Proposed Project Water Demands 32-3

The Hunter EIR reports calculates that this project will consume 19.88- acre feet of municipal water and 17.16- acre feet of groundwater.

This EIR ignores the very factual issues surrounding both municipal and groundwater available. This project should not be allowed to draw any groundwater as indicted for landscaping purposes. Instead, there are commercially available systems to capture all bath water, treated and used for flushing toilets and landscaping. Similar projects have demonstrated a net savings of up to 33% in potable water. A greywater system for *each* housing unit should be mandated.

32-3 Cont.

Wastewater Treatment

The Hunter EIR ignores whether the existing sewer lines situated North to South dissecting VVMHP. If this project is approved then Hunter should be required, under bond, to pay for not just the physical wastewater upgrades necessary but also due payment and consideration afforded to the VVMHP residents during any construction necessary to an increase in wastewater capacity to accommodate the wastewater demands determined necessary.

32-4

Appendix J
Water Neutral Report

This water neutral report vacuously concludes that rather than undertaking and paying for a portion of the cities Capital Improvement Program (CIP) need that they opt to offer a fop in the form of $596,809.19 in retrofit fees. Currently, the CIP five-year projected cost approximate $60,000,000. If the City should choose to approve the Hunter Project, then an a more equitable requirement would be to require Hunter to pay ten (10%) of that amount or the sum of $6,000,000 to assuage the required in lieu fees.

32-5

3.14-1.Traffic

All of this report's conclusions are either erroneous, misleading, or incorrect. It does not matter what theoretical studies the reference all of the surface roads on the Eastside of town are already at maximum capacity. There is a solution which the Hunter study studiously avoids. If they wish to have the city approve this project, then let them significantly help ameliorate the Eastside traffic problem by paying for a new bridge connecting Adams Street to the Silverado Trail.

32-6

Respectfully submitted:

Richard Crebs
(This letter off comments regarding the Hunter Project are submitted by me as an individual and not on behalf of any organization)

Response to Letter 32
Richard Crebs
November 2, 2021

32-1 The commenter states the Project is flawed because it is proposed on fill placed on the site as part of the City's Flood Protection Project; would be subject to seismic events and flooding; would increase demand for water; and would increase traffic congestion. The comment recommends the site be left as open space.

Consistent with the recommendations in the Geotechnical Report, the existing fill/soils on the site would be removed, re-compacted and returned to the site along with additional fill. The site would be graded and leveled to ensure a stable base for new development (DEIR p. 2-31).

Potential hazards associated with seismic events is addressed in Section 3.6, Geology and Soils. As noted on page 3.6-12, the Project site is not crossed by an active earthquake fault zone, nor is it crossed by any potentially active faults. The closest earthquake fault zones are the Rodgers Creek Fault, located about 15 miles to the southwest of the Project site and the southern part of the West Napa Fault, located approximately 17 miles southeast of the Project site. Development would be required to comply with the California Building Code which sets forth structural design requirements associated with seismic loads. As part of this process, a design-level geotechnical investigation would be completed (in addition to the existing geotechnical investigation already completed) to assess site conditions at a greater level of detail and make geotechnical recommendations to be incorporated into the site development plan, grading plan and building plan. The City requires that such geotechnical recommendations be verified at time of grading and building construction prior to issuance of a certificate of occupancy. In addition, mitigation measure GEO-1 is imposed to ensure preparation of a design-level geotechnical report that includes specific design criteria to ensure the Project is designed to meet all current seismic safety standards (DEIR pp. 3.6-22 and 3.6-23).

Please see Master Response 3 that addresses flooding concerns and Master Response 2 that addresses water supply concerns and Response to Comment 10-2 regarding traffic.

The Project site is not owned by the City and is not public open space but designated by the General Plan and zoned for Medium Density Residential development. The commenter's desire to see the site left undeveloped is noted and forwarded to the decision makers for their consideration.

32-2 The comment references the analysis of potential flooding due to a levee failure and suggests residents should purchase flood insurance in the event of a flood event and

the City should require the Project applicant post a bond to "hold the City harmless" in the event of a flood.

The Draft EIR evaluates flood risks due to a 200-year flood event as well as due to failure of the levee starting on page 3.9-8 in Section 3.9, Hydrology and Water Quality. As noted on page 3.9-8, The City's Flood Protection Project, specifically the levee and floodwall along the Napa River and Sulphur Creek, was constructed to provide protection from a 200-year flood event. The levee was designed and constructed in accordance with all applicable U.S. Army Corps of Engineers Engineering Manuals and has been reviewed by the Federal Emergency Management Agency or FEMA. The flood control system was also evaluated for stability during a seismic event and was found to be stable by two engineering firms. The Project site is outside of a FEMA special flood hazard area; therefore, purchase of flood insurance would be required. However, because there remains residual risk of flooding from catastrophically large floods (such as a 500-year flood) or levee failures, residents in flood-prone areas, even if outside of a regulatory flood zone, have the option to purchase optional flood insurance. Regarding the applicant's liability in the event of a flood and purchase of a bond to absolve the City of any responsibility to residents in the event of a catastrophic flood event, please see Master Response 3.

32-3 The comment opines that the EIR ignores issues associated with availability of water and believes the Project should not use groundwater for landscape irrigation in lieu of capturing and treating all domestic wastewater or "grey water" for irrigation and goes on to state a grey water system should be mandated for every residence.

The Project is required to off-set its water demand, per the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code. In compliance with these requirements the Project applicant prepared a Water Neutral Report (see Appendix J). The City requires all new projects to be water neutral and not consume water without offsetting the demand. Please see Master Response 2 that addresses the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code requirements.

32-4 The comment is referring to the City's wastewater system and whether the Project would increase wastewater conveyance in the same infrastructure that also serve the Vineyard Valley Mobile Home Park and states if the Project is approved the applicant should be required to fund any improvements to the City's wastewater system.

The Project's connection to the City's wastewater (or sewer) system is described on page 2-29 in Chapter 2, Project Description. Wastewater flows from the western end of the Project site are proposed to drain into an existing public manhole at the corner of Starr and Hunt Avenue via new 8-inch sewer pipes. The area east of Starr Avenue is proposed to drain east through the Project site via new 8-inch sewer pipes into an existing public manhole on the adjacent parcel in the Vineyard Valley Mobile Home Park. The City's system is sized to accommodate wastewater flows from the Project and there is adequate conveyance capacity within the existing lines. The Project

would not require any modifications to the City's system and impacts were determined to be less than significant (DEIR p. 3.13-29). Please see Master Response 4 that provides additional details regarding the City's sewer system and ability to serve the Project.

32-5 The comment questions if the Project's estimated in-lieu fee is adequate based on the City's current Capital Improvement Projects (CIP) budget.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, please see Response to Comment 2 that addresses the Project's compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

32-6 The comment expresses general concerns regarding traffic congestion in the City and would like the Project to pay for a new bridge to connect Adams Street to the Silverado Trail.

The Proposed Project does not include the construction of a new bridge and does not involve any further extension of Adams Street, east of Starr Avenue. Any extension of Adams Street connecting to Silverado Trail would require further study and approval by the City and the City's Public Works Department has determined is not required for this Project.

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Comment Letter 33

From: Nicole Dale <nicole.garriott@gmail.com>
Sent: Thursday, October 28, 2021 9:47 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Public Comment - Hunter Subdivision

Dear Maya,

We share a property line with the proposed Hunter Project and are in opposition of the development. In addition to our concerns over traffic, water, flooding, etc. another top concern is the loss of open trail space that we see so many St. Helena residents use daily. There are no other open walking or hiking paths in St. Helena and it would be a huge loss to both locals and tourists who all enjoy the space. 33-1

A separate concern- we understand that one of the biggest benefits to this project is affordable housing. The fact that the developer is proposing ADU's on the single-family home lots to fulfill the affordable housing requirement is offensive to the law. 33-2

Best Regards,
Nicole and Scott Dale
1326 Monte Vista Ave

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Response to Letter 33
Nicole Dale
October 28, 2021

33-1 The comment states general opposition to the Project and explains that the commenter shares a property line with the Project. The commenter expresses general concerns over traffic, water, flooding, and the adjacent walking trail.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, to address the commenters' general concerns regarding water and flooding, please see Master Responses 2 and 3.

33-2 The commenter opposes the Project's proposed ADUs and claims the ADUs should not be used to fulfill the affordable housing requirement.

The City's Inclusionary Housing Ordinance requires a minimum level of affordability in the housing which is ultimately developed on the Project site. The Project applicant will submit a detailed proposal regarding how the Project will meet this requirement which will be part of a subsequent discretionary approval (Affordable Housing Agreement) at or prior to the recordation of the Final Map. This must be approved by the City Council before development of homes can take place. Staff will review the applicant's proposal before making a recommendation to the City Council on the Affordable Housing Agreement. A determination of consistency will be made at the time that subsequent application is submitted and reviewed (DEIR pp. 2-18 and 2-32).

The commenter's opinion is noted and forwarded to the decision makers for their consideration.

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Comment Letter 34

From: Gayle Davies <gayleddavies@gmail.com>
Sent: Monday, November 29, 2021 9:15 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>; Paul Dohring <PDohring@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>
Subject: [External] Hunter Project

Dear Maya,

I respectfully submit these comments in response to what I see as a deficiency in the DEIR process for the Hunter Project, specifically, violations of AB 52.

It is known that this area was a burial and artifact site of Native Americans who resided here before us. AB 52 has requirements applicable for this project, including consultation with Native American tribal representative(s) affiliated with this geographic region.

California law defines consultation as the "meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement." Gov. Code § 65352.4 (emphasis added).

Respectful, effective consultation consists of in-person meetings between appropriate representatives of the parties, which the tribe may wish to host at its reservation or rancheria. During consultation meetings, the parties should make a point to identify any significant impacts the proposed project would have on tribal cultural resources and discuss potential avoidance or mitigation measures; the tribe may identify additional consultation topics in its response to the lead agency's notice letter. Agencies should also be aware that tribes may take a broad view of cultural resources and extend this characterization to entire landscapes, as contemplated under AB 52's tribal cultural resources definition. *See* Pub. Res. Code § 21074(a)(1)(A). AB 52 also requires agencies to recognize that tribes may attach cultural or spiritual value to these resources, apart from their scientific or archaeological merit. *Id.*

34-1

This DEIR does not indicate such consultation occurred and in fact seems to state the opposite, that the Tribal Chairman, Scott Gabaldan, was not only not in consultation, but not contacted.

This is law.

Beyond law, is nothing sacred?

Please consider.

Gayle Davies

St Helena resident

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Response to Letter 34
Gayle Davies
November 29, 2021

34-1 The comment suggests that the Project did not comply with AB 52 requirements for consultation with Native American tribal representatives affiliated with the area including Scott Gabaldan, tribal chairman of the Mishewal Wappo Tribe of Alexander Valley.

Section 3.5, Cultural and Tribal Cultural Resources of the Draft EIR describes the Project's compliance with AB 52 requirements. Pursuant to AB 52, the City sent letters to all tribes (who have requested notification) who are traditionally or culturally affiliated with the geographic area of the Project site. A letter was sent to Vincent Salsedo with the Mishewal-Wappo Tribe of Alexander Valley on April 23, 2018. No response was received from the Mishewal Wappo Indian Tribe in response to the AB 52 letter. All records of correspondence related to AB 52 notification and any subsequent consultation are on file with the City.

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Comment Letter 35

November15, 2021

To: MAYA DEROSA, AICP

City of St. St. Helena Planning and Community Development Department

My comments focus on the section of the EIR defined as HYDRLOGY AND WATER QUALITY, Section 3.9. and my focus is on the potential effects of the proposed Hunter
Subdivision on the Vineyard Mobile Home Park, a community of over 55 age group. We strongly believe that mitigation is necessary in several areas. The EIR for the proposed Hunter subdivision states that no mitigation is necessary. The following areas need mitigation or further research.

1. Section 3.9.1 looks at Regional Climate. This section studies only up to 2016. We have had 2-4 years of drought since 2016 and this needs to be factored into the decision-making process. Climate change could cause a continuation of drought. 35-1
2. There are several references to Engineering studies done to design, finance and construct the St. Helena Comprehensive Flood Control and River Restoration Project. The owners of the Hunter property need to do their own Engineering studies and the City needs to more clearly direct the public how to find these studies if in fact there are some current studies available. 35-2
3. Page 3.9.8 of the EIR states "The Proposed Project does not include any element that exacerbates existing flood hazards for off-site properties or the general public (i.e.). through flood plain encroachment that blocks or redirects flood decision-making flows or by placing habitable structures within areas with reasonable risk of flooding). 35-3
4. Where is the proof of this assertion? The engineering studies if available should be reasonably easy to obtain and read.
5. The Hunter property is at a higher elevation that Vineyard Valley. When there are rainstorms, excessive drainage would flow toward Vineyard Valley Mobile Home Park. We are all aware that the sewer systems in the City of St. Helena as well as VV Mobile Home Park are inadequate. The Proposed Hunter Development must design additional sewer systems and not use already inadequate drainage. The new sewer system must include blue or purple pipe to direct water to the Water Treatment Plant where it will be treated to use as non-potable water for landscape and other non-potable uses. 35-4
6. One of their intentions is to direct overflow to the Flood Project Detention Basin. The Detention Basin was designed to retain overflow and direct overflow through a water cleaning process and back into the Nap River. This was designed when the property consisted of 16.9 acres of permeable soil. The Proposed Project once again is using studies done while designing the Flood Project. They determined that the Proposed Hunter Project would consist of up to 70% of the impervious surface area. The Proposed Hunter Project is *estimated* to be developed at *approximately* 58% of impervious surface. Words like estimated and assumed are not scientific. That language is repeated throughout this EIR. 35-5
7. Page 3.9.45 states that the entire project was paid for by Measure A sales tax and other government bonds and loans. I think the Proposed Project should design and build their own Detention Basin. Why should they be able to take advantage of money coming from a sales tax and intended to protect housing already constructed. This as well as River Restoration was the purpose of the Measure A Ordinance. On page 1 of the Measure A Ordinance under Section 2 Findings, Letter G states "None of the projects in the Plan are intended or designed to 35-6

encourage population growth in Napa County." This is repeated on pages 7 and 8. This reference to "The Plan," refers to the plan put forth in the Measure A Ordinance. 35-6 Cont.

8. In summary this Proposed Project would endanger Vineyard Valley because of their inadequate plan for directing runoff. 35-7
9. They intend to use the Detention Basin designed for very different circumstances, tagging on to the 33 million dollar Flood Project. This could endanger residents of Vineyard Valley Mobile Home Park. 35-8
10. The dust and dirt will affect the quality of life for as many years as it takes to build. I am guessing two to three years. 35-9
11. It is in direct conflict with the Measure A Ordinance. This alone should stop the Proposed Project. 35-10
12. The added traffic will make Vineyard Valley residents as well as our neighbors suffer the difficulties created by this added traffic. This is not only an inconvenience but also creates a safety hazard. Emergency evacuations would be impossible. 35-11
13. As I read the EIR a few times it became evident that a wealthy Developer has proposed building a project using Engineering and Geomorphic data from the St. Helena Comprehensive Flood Control and River Restoration Project. They want to use the Detention Basin designed when the 16.9 acres was permeable surfaces. Words like estimate and assumed do not show adequate studies to go forward with the project. 35-12

Priscilla (Pa) Dell St. Helena

Response to Letter 35
Priscilla Dell
November 15, 2021

35-1 The comment discusses how climate change is addressed in Section 3.9, Hydrology and Water Quality and questions why current rainfall conditions post 2016 were not included in the Environmental Setting section, as the City has been experiencing drought conditions since 2016. The comment goes on to note that climate change is contributing factor to drought.

Information from the Western Regional Climate Center, which provides rainfall data dating from 2016 was the most current rainfall information available at the time the Draft EIR was being compiled in 2019. The information in Section 3.3, Air Quality has been updated based on more recent data from the National Oceanic and Atmospheric Administration and the revised text is provided in Chapter 3, Changes to the Draft EIR. Climate change is recognized to be a contributing factor to drought conditions and the commenter's request that this be factored into the City's decision making process is noted and forwarded to the decision makers for their consideration.

35-2 The comment suggests that the Project proponent should do their own engineering studies related to the City's Comprehensive Flood Control Project. In addition, the comment suggests that the City should more clearly direct the public to current studies.

The Project applicant is not required to conduct independent engineering studies to evaluate the City's Flood Control Project. The City of St. Helena along with a team of consultants designed, permitted, and constructed the multi-objective flood control and habitat restoration project which was constructed in 2009 and 2010, and provides 200-year flood protection for residential properties along the Napa River as well as restores important floodplain and aquatic habitat. See also Master Response 3 for further information regarding the levee and flood protection.

Regarding recent documents related to the City's Comprehensive Flood Control Project, recent inspection reports and summary reports can be found on the City's website here: Flood Control and River Restoration Project | City of St Helena.

35-3 The comment questions the conclusion of the Draft EIR that the Proposed Project will not exacerbate flood hazards.

As stated in Section 3.9 of the Draft EIR on pages 3.9-7 and 3.9-8, the Project site is not located within a FEMA special flood hazard area based on mapping that is provided by FEMA. The Project site is protected by the recently constructed levee that is designed to provide 200-year flood protection with additional freeboard protection. As a result, by definition, using the most recent mapping provided by

FEMA in 2012, the Project would not encroach upon a flood zone, redirect flood flows, or place habitable structures in an area with reasonable risk of flooding.

See Master Response 3 for further discussion of the levee system.

35-4 The comment claims that excessive storm drainage from the site would flow toward Vineyard Valley Mobile Home Park. In addition, the comment suggests that the Project applicant include blue or purple (recycled water) pipes to direct water to the Water Treatment Plant for use as non-potable water after treatment.

As stated in the Draft EIR on pages 3.9-44 and 3.9-45, the additional stormwater runoff created by the Proposed Project would be directed to the City-owned off-site detention basin, adjacent to the Project site, which has been designed to store the increase in storm water runoff from the Project site during a 100-year storm event. In fact, the detention basin was designed assuming that the Project site would be developed with 70% impervious surfaces; however, the Project would develop less of the site (58%) with impervious surfaces. In addition, the Project would require compliance with the City's Municipal Code and improvement standards associated with approval of tentative subdivision maps, which currently do not require recycled water infrastructure be provided. Therefore, since the off-site detention basin was designed with adequate capacity to accommodate stormwater flows from the Proposed Project there would be a low likelihood of excess flows draining from the Project site into the adjacent Vineyard Valley Mobile Home Park.

Please see Master Response 4 for further information on the City's wastewater system.

35-5 The comment suggests that the City's detention basin was not designed appropriately and did not correctly factor in the Project's contribution of stormwater runoff. The comment goes on to note using words like "estimated" and "assumed" are not scientific.

As stated in the Draft EIR on page 3.9-45, the City's detention basin was designed to accommodate future development of the Project site assuming the City would be developed with up to 70% impervious surfaces. However, the Proposed Project would develop less of the site with impervious surfaces (58%) which would produce lower runoff volumes, and therefore the detention basin would have more than sufficient capacity to accommodate stormwater flows from the Project site.

Regarding the terminology used to describe development of the site it is virtually impossible to determine with 100% certainty the exact outcome of various engineering studies. For example, development of the Project site with impervious surfaces could fall between 57.38% to 58.23%; therefore, it is proper to estimate or assume approximately 58% of the site would be developed with impervious surfaces. This is an accepted approach in scientific and engineering studies.

35-6 The comment suggests that the Project build its own detention basin and contends that the Project is not consistent with the language in Napa County's Measure A Ordinance, which states that flood control projects in the County should not be designed to encourage population growth.

The City's detention basin, as noted on page 3.9-45 of the Draft EIR, was designed with the knowledge that the Project site could be developed and introduce as much as 70% impervious surface coverage due to development of the site. The Project, as designed, would introduce 58% impervious surface coverage. Therefore, as proposed, there is adequate capacity in the City's existing detention to accommodate the Project and there is no need to construct an additional basin. Measure A, as described on page 3.9-6 of the Draft EIR, was passed in 1998 by Napa County and provided the basis for a number of flood improvement projects, whereas the Project site has been designated and zoned for future residential development dating as far back as the City's 1975 General Plan, as stated on page 2-12 of the Draft EIR. The Project is not funded in any part with Measure A funds and the City's Flood Control Project, which did receive Measure A funds, was designed to provide flood protection for both developed areas within the City as well as areas already planned for future development, including the Project site.

35-7 The comment claims that the Project would not adequately direct stormwater runoff and would 'endanger' Valley Vineyard Mobile Home Park.

Please see Response to Comment 35-4.

35-8 The comment suggests that the City's detention basin was designed under different circumstances and the Project could endanger Vineyard Valley Mobile Home Park residents.

As stated in Responses to Comments 35-4 and 35-6, the detention basin was designed assuming that the Project site would be developed with 70% impervious surfaces. The Proposed Project would develop only 58% impervious surfaces, and therefore the City's detention basin, which was planned to accommodate development of the Project site, would have more than enough capacity to handle runoff volumes from the Project site.

35-9 The comment refers to dust and dirt affecting the quality of life over a two to three-year period of development.

There is no evidence that dust attributed to construction activities would measurably affect the quality of life. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required.

35-10 The comment alleges the Project is in direct conflict with Measure A and this should prohibit the Project from moving forward.

Please see Response to Comment 35-6 and Master Response 3.

35-11 The comment is referring to an increase in traffic associated with the Project that would create a safety hazard and would make emergency evacuation impossible.

The comment does not elaborate on what safety hazards the Project would create nor does the comment indicate where the analysis in the Draft EIR may be deficient or inadequate regarding safety. Therefore, a response is not required.

Master Response 1 provides further information on concerns regarding emergency evacuation.

35-12 The comment refers to prior concerns raised specific to the use of information from the City's Flood Control Project; adequacy of the detention basin to accommodate the Project's stormwater; and terminology describing information from technical studies.

Please see Responses to Comments 35-3 through 35-6.

Comment Letter 36

October 23, 2021

Dear City of St. Helena Planning Department and City Council,

I submit the following Comments on the Draft Environmental Impact Report for the Hunter Subdivision Project:

1. There is currently an unmanaged traffic problem at the east side of the intersection of Adams Street and Railroad Avenue. Specifically, egress and ingress on Adams Street at the north side of the parking lot for Smiths Pharmacy, Safeway, and a few other businesses is already unsafe. How will the Hunter Subdivision be built without severely exacerbating this already dangerous traffic problem? 36-1

2. There is currently an unmanaged traffic problem on Adams Street between Main Street and Railroad Avenue. Specifically, traffic already backs up on Adams Street on the east side of Main Street impeding access to the service station on the north east corner of the intersection as well as Chase Bank on the south side of Adams Street. During tourist seasons the traffic on this block of Adams Street backs up to the four way stop sign/ Intersection at Adams Street and Railroad Avenue causing dangerous and time consuming traffic jams. It is gridlock until the traffic signal changes. How will the Hunter Subdivision be built without severely exacerbating this already dangerous traffic problem? 36-2

3. There is a conservation easement intended to preserve the land, protect wildlife habitat, And provide for public access consistent with the purposes of the Flood Protection Corridor Program in direct proximity to the proposed Hunter Subdivision project. How would the Hunter Subdivision project be able to proceed without having a negative impact on the flora, fauna, and Napa River adjacent to the proposed project? 36-3

4. We recently underwent emergency evacuations due to wild fires surrounding St. Helena. Evacuation for the residents of Vineyard Valley Mobile Home Park (VV), occupied mostly by senior citizens, was difficult and scary. Had the fire come .25 miles closer there would surely have been significant loss of life. Currently there is Pope Street or the levee road as exit routes for VV. How is it possible for the developer to build and populate the Hunter Subdivision without significantly endangering the lives of VV residents the next time an emergency evacuation is ordered? 36-4

5. There is already a severe parking problem on Star and Hunt Avenues and other nearby streets due to insufficient parking at Hunts Grove, Woodbridge Village, the recently acquired fourplex on Adams Street, and the numerous multifamily apartment buildings on Grove Court. With a proposed 87 homes, and possibly more, how will the Hunter Subdivision provide the minimum 174 parking spaces that would be required in order to not exacerbate our current parking problems? 36-5

6. How have the developers actually *proven* the Hunter Project would be water neutral and have no negative impact on the Napa River at the very outset of the project and remain water neutral in perpetuity? 36-6

I look forward to reading the results of the studies that will be conducted to address my, and and all the other peoples' numerous concerns about the foreseeable negative impacts the Hunter Subdivision Project would have on St. Helena.

Sincerely,
Nancy Dervin

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Response to Letter 36
Nancy Dervin
October 23, 2021

36-1 The comment expresses concern regarding traffic congestion at the intersection of Adams Street and Railroad Avenue, and potential traffic safety issues due to egress and ingress for the parking lot currently used by businesses near the intersection.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. The intersection of Adams Street and Railroad Avenue was thoroughly analyzed in Section 3.14, Transportation and Circulation of the Draft EIR and Project impacts at this intersection were found to be less than significant. Additionally, vehicular collisions within the City were also analyzed on page 3.14-47 of the Draft EIR and again Project impacts were determined to be less than significant.

36-2 The comment expresses general concern regarding traffic congestion along the Adams Street corridor, specifically near the east side of Main Street near the intersection of Adams Street and Main Street.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, as explained on page 3.14-1 in Section 3.14, Transportation and Circulation, "the California Environmental Quality Act (CEQA) Guidelines were updated to remove evaluation of the delay that vehicles experience at intersections and on roadway segments, which is often measured using a level of service (LOS) metric. Therefore, the operational aspects of the Proposed Project that contribute to delay and congestion on local roadways is no longer considered an environmental impact under CEQA. These concerns are discussed in the Proposed Project's Traffic Impact Study (TIS) in relation to consistency with General Plan policies (see Appendix K)." The analysis of vehicular queuing and congestion were addressed in Appendix K and also in Section 3.14. Project impacts were concluded to be less than significant for this section of Adams Street and Main Street.

36-3 The comment refers to a conservation easement designed to preserve land and protect habitat and provide public access consistent with the City's Flood Protection Project and questions how the Project would not affect the land, habitat and access provided for under the conservation easement.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no response is required. The City has confirmed that the easement noted by the commenter does not include any part of the Project site. Please see Chapter 3, Changes to the Draft EIR for a trails map showing adjacent trails near the Project site.

36-4 The comment states a concern related to emergency evacuation due to wildfires, specifically for Vineyard Valley residents.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, emergency evacuation was analyzed in Section 3.14 of the Draft EIR and Project impacts were determined to be less than significant. Please also see Master Response 1, that provides more details specific to emergency evacuation for both Vineyard Valley residents and Project residents.

36-5 The comment expresses concern over the Project's parking supply and the parking supply of the surrounding neighborhood.

The CEQA Guidelines do not require that parking be evaluated in an EIR; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested City staff shall confirm the Project complies with the residential parking requirements in the St. Helena Zoning Code.

36-6 The comment expresses concern related to the effectiveness of the City's Water Neutral Policy.

Please see Master Response 2 that addresses the City's ability to supply water to the Project and also address concerns regarding the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

Comment Letter 37

From: jdicksong@gmail.com <jdicksong@gmail.com>
Sent: Friday, October 15, 2021 2:08 PM
To: Mderosa@cityofsthelea.org
Subject: HUNTER PROJECT

To: St. Helena Planning Department
Our community faces serious challenges which would be compounded by the proposed Hunter Project. Its proximity to Vineyard Valley recalls to us the heroic measures necessitated there during flood and fire emergencies over recent years. Traffic issues are also profound, particularly as regards the Pope Street Bridge. Local practical and safety considerations must weigh more heavily than the profit motive for development. Please reject this Hunter Project. 37-1 37-2 37-3

Julie Dickson, 1817 Spring Street, St. Helena

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Response to Letter 37
Julie Dickson
October 15, 2021

37-1 The comment generally states that the Proposed Project would compound existing community challenges and recalls a previous flooding event.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

37-2 The comment refers to 'profound' existing traffic issues, especially related to the Pope Street Bridge.

The comment does not address the accuracy or adequacy of the Draft EIR, and the assertion of "profound" issues is the commentor's unsupported opinion; therefore, no further response is required. Potential Project impacts, as well as impacts related to the Pope Street Bridge are analyzed in detail in Section 3.14 Transportation of the Draft EIR and within Appendix K, Traffic Impact Study. The comment is noted and forwarded to the decision makers for their consideration.

37-3 The commenter opines that practical and safety considerations of developing the Project should be weighted more than profits and that the Project should not be approved.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 38

From: C. Echols <cechols47@gmail.com>
Sent: Sunday, October 17, 2021 8:50 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision Project

I live at the back of VV MHP. One advantage of living back here is the quiet and views. I am greatly concerned about potential noise, traffic, water and sewage availability, and possible property devaluation.

38-1

What steps are being taken to lessen the negative impact on the VV MHP residents?

Thank you,
Chris Echols
11 Del Rio Court

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Response to Letter 38
Chris Echols
October 17, 2021

38-1 The comment states his general concerns related to noise, traffic, water, sewer capacity, and property devaluation.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, the Project's impact on noise, transportation, water, and sewer capacity are analyzed in Sections 3.11, Noise and Vibration; 3.14, Transportation and Circulation; and 3.13, Utilities and Service Systems in the Draft EIR. The commenter's concern related to property devaluation is an economic concern that is not required to be evaluated in an EIR. As described in Section 3.13, the Proposed Project would not exceed the City's current permitted wastewater treatment plant capacity; also, pursuant to Municipal Code Section 3.32.020, the City collects development impact fees on new development to pay for public improvements related to sewer projects. The Project applicant would be required to pay these fees, which would help fund upgrades and improvements to the City's sewer system. Please see Master Response 2, related to water concerns and Master Response 4 that addresses sewer issues.

The analysis of noise associated with Project construction and operation is included in Section 3.11, Noise. Noise associated with construction activities is often the most annoying to nearby residents. As discussed on page 3.11-16, the City exempts construction activity noise if conducted during specific limited daytime hours. The City's Health and Safety Code (Chapter 8.24 of Title 8, the Health and Safety Code) requires noise generating construction activities (including demolition, excavation, and building construction), be restricted to the hours between 8:00 a.m. and 5:00 p.m., Monday through Saturday, and prohibited on Sunday and holidays (City of St. Helena Chapter 8.24). This ensures that sensitive receptors are not disturbed by early morning or late night activities. However, the City's 1993 General Plan includes Implementing Policy 8.3.11, which states "Require construction operations to use noise suppression devices and techniques and limit noisy construction activities to the least noise sensitive times (8 a.m. to 5 p.m., Monday through Friday)." Note, the City's 2019 General Plan does not include this requirement. Due to the proximity of residences to the Project site and the potential for construction noise to be an annoyance, the impact is considered potentially significant and mitigation measure NOI-1 is required. This mitigation requires administrative controls, engineering controls, and/or installation of sound abatement. Installation of an effectively placed storage container or a temporary plywood or blanket barrier on a portion of the site boundary that blocks line-of-sight between the source(s) of noise emission and the receptor of concern (e.g., residence) would be expected to provide a minimum of 3-5 dBA of noise reduction. Compliance with the City's Health and Safety Code and mitigation measure NOI-1 would address construction noise (p. 3.11-16). Noise

associated with Project operation which primarily is related to an increase in traffic was modeled to determine if the City's noise standards would be exceeded. Project-related traffic noise increases along roadways where the Project would contribute trips would in all cases be less than 1 dBA, as shown in Table 3.11-8. Such increases would be well below the 3 dB perceptible increase threshold and below the City's noise standards (p. 3.11-20). Thus, impacts are less than significant.

Comment Letter 39

From: Cindy Ford <cford327@gmail.com>
Sent: Monday, November 1, 2021 4:23 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Subject: [External] COMMENT TO PLANNING COMMISSION and the AGENDA ITEM

We are writing to register our strong objections to the proposed Hunter Subdivision on the east side of St. Helena. While we recognize the need for more housing in the Napa Valley, and low cost housing in particular, we find the Draft EIR for this project inadequate in several ways. 39-1

The DEIR seems particularly short sighted in its assessment of water supply to the proposed 80+ households. Because St. Helena's current water shortage has put all residents and businesses in the city under strict water rationing, the idea of adding a significant number of homes to our already inadequately supplied town simply does not make good sense. Yes, droughts come and go, and we might hope for relief at some point in the future, but climate change is real, it is here now, and using past water supply and usage figures to predict future needs is foolhardy. More to the point, the idea that retrofitting 333 households with more efficient fixtures will result in an adequate supply of water to this development is dubious to say the least. We would assert that, given our history of droughts, most St. Helena residents have already upgraded to water efficient toilets and showerheads in recent years; how will the city or the developer identify households to be retrofitted? What data shows that sufficient water would be the result of this retrofit? How can the developer claim the existing well proposed as the source of landscaping irrigation can supply sufficient water in future years? How can the DEIR claim that this proposed subdivision does not significantly impact St. Helena's water supply? 39-2

Another area of concern is the health and safety of households built behind the levee in the event of flooding. The plan and DEIR are based on a two hundred year flood plain projection which strikes us as overly optimistic in the extreme. Again, climate change makes such assumptions risky; better to plan for the worst and hope for the best. To make matters worse in this regard, we understand neither the Army Corps of Engineers nor FEMA have inspected and certified that the levee meets required standards. What if the levee fails because of shoddy construction or inadequate maintenance? The idea that households in the proposed project could shelter upstairs in the event of a flood is both cold hearted and cynical! Who pays for the property damage in that case? The developer? The city? What would that do to the city's finances and the city taxpayers? 39-3

Traffic impacts are another major concern. Hunt and Starr Avenues are already full of cars going too fast and trying to circumvent Hwy 29 traffic. Adding more houses along an extended Adams Street and Starr Avenue will only make matters worse since the only points of entry and exit are Adams or Hunt connecting to Hwy 29, or Starr connecting to Pope Street. We fail to see how the proposed development meets its goal of "minimizing traffic related impacts" as stated in the Project Objectives. What happens if we have a major earthquake or fire or flood? Residents in our neighborhood already have few options given the traffic on Hwy 29 and the very limited capacity of the Historic Pope Street bridge. The DEIR states that, "given the project is so flat, the proximity to hilly terrain or landslides due to post-fire conditions would not be a concern." That is laughable since the Silverado trail is closed just north of Pope Street right now because of a landslide caused by rain! How can the DEIR claim to have found "no significant impact with regard to wildfire" given the present conditions? Adding more households to this residential neighborhood as proposed will result in more dangerous conditions in an emergency and should not be approved by the Planning Commission. 39-4 39-5

As residents of St. Helena we are grateful for the opportunity to express our concerns about this proposed subdivision. We hope the Planning Commission and the City Council will think carefully about all proposed developments, who benefits from them along with who does not, how the city can accommodate them fairly and support them with adequate city services, and what is the right thing to do for the whole community.

39-6

Sincerely,
Cindy and John Ford
cford327@gmail.com

Response to Letter 39
Cindy and John Ford
November 1, 2021

39-1 The commenters express their general opposition to the Project and Draft EIR.

The commenters' opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

39-2 The comment raises concerns about the City's water supply and Draft EIR's assessment of water supply impacts. The commenter takes issue with the effectiveness of the City's Water Neutral Policy and how it is used in the analysis of the proposed Project's water demand. The comment also questions whether existing groundwater resources could sufficiently serve the Project.

The City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code requires new development to "completely offset its water requirement" by identifying residential or non-residential properties eligible for retrofitting with water efficient hardware and verifying that the required number of retrofits have been completed prior to the issuance of a certificate of occupancy (DEIR p. 3.13-21). To accomplish this the City requires all applicants to prepare a Water Neutral Report identifying compliance. Adherence to the City's Water Neutral Policy and Municipal Code to fund such measures as fixing an existing leaking water conveyance pipe would offset demand by increasing water supplies compared to the existing conditions of water losses due to the leak. As a result, compliance with these requirements offsets new water demands with measures that reduce demand elsewhere or otherwise increase water supplies. Therefore, compliance with the City requirements is an appropriate and effective measure to include in the analysis of the Draft EIR. See also Master Response 2.

As discussed on page 3.9-43 of the Draft EIR, the aquifer where the Project is located on is known to be a productive alluvial aquifer, and therefore, there would be sufficient yield available from the on-site well to supply the Project's landscape irrigation demand as also demonstrated by the findings of the site-specific well pump test conducted on the existing agricultural well on the Project site. The proposed rate of pumping is relatively low and the resulting radius of influence would be highly localized, and greatly overshadowed by the radius of influence associated with the much higher producing agricultural and municipal supply wells in the surrounding vicinity.

39-3 The comment expresses concerns related to the Project's proximity to the levee and the event of potential flooding. The comment specifically expresses concerns related to the current condition of the levee in terms of its inspections and certifications by

FEMA or the Army Corps of Engineers. The comment also questions who would be responsible for costs in the event of a major flood and subsequent potential property damage.

Please see Master Response 3 that addresses concerns associated with the levee and flooding.

39-4 The comment expresses general concerns regarding traffic congestion along Hunt Avenue and Starr Avenue, as well as traffic connecting to Highway 29.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, the comment is noted and forwarded to the decision makers for their consideration and no further response is required.

39-5 The comment expresses concern regarding landslides as well as the potential for emergency evacuation routes to be congested. The comment states that the sentence within the Executive Summary of the Draft EIR that states the "Project site is flat so fire hazards due to proximity to hilly terrain or landslides due to post-fire conditions would not be a concern" is false since there are presumably closures to Silverado Trail currently due to landslides caused by rain.

In 2018 the CEQA Guidelines, Appendix G, were updated to include a separate evaluation of wildfires. Appendix G focuses on those areas located "in or near state responsibility areas or lands classified as very high fire hazard severity zones." On page E-3 of the Executive Summary, it explains the Project site is not located within a state responsibility area and not designated as being within a very high fire hazard severity zone. Because the Project site is flat potential fire hazards associated with spread of wildfire due to sloped or hilly terrain would not be a factor. The closure of Silverado Trail due to mudslides associated with loss of vegetation is not applicable to this Project. Because the Project site is flat there would not be any hazards associated with mudslides. Please see Master Response 1 which addresses concerns regarding emergency access and evacuation routes.

39-6 The comment thanks the City for the opportunity to comment on the Proposed Project and asks the City to review the Project's impact on the whole of the community.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

Comment Letter 40

From: Chris Fowler <chris@alanssainthelena.com>
Sent: Saturday, October 30, 2021 6:55 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Subject: [External] Public Comment November 2 PC Meeting

Dear Planning Commission,

I am commenting on Agenda Item 5.1. I will try and keep this rather brief. Other commenters have discussed some very large elephants that are in the DEIR room, and I would like to point out the Option 4 elephant that is standing in the corner. Option 4 seems conveniently buried at the bottom DEIR, but maybe they were saving the best for last. 40-1

St. Helena is running out of available space and time to even make a dent in the next RHNA cycle. Water and potential site flooding issues aside, maybe now is a good time for some discussion and consideration of low and affordable housing alternatives. Adams Street dead-ends at this parcel, is this where the can-kicking can finally stop? 40-2

Thank you,
Chris Fowler

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Response to Letter 40
Chris Fowler
October 30, 2021

40-1 The comment expresses interest in exploring "Option 4."

It is assumed that "Option 4" is a reference to Alternative 4, which is described beginning on page 5-14 of the Draft EIR. The comment does not identify any specific areas where the Draft EIR analysis is inadequate. The comment does not identify any components of Alternative 4. Therefore, no further response is required. However, the commenter's interest in Alternative 4 is noted and forwarded to the decision makers for their consideration.

40-2 The comment expresses interest in providing low and affordable housing in the City.

The Project proposes affordable housing as described in Chapter 2, Project Description. The Project applicant is also required to prepare an Affordable Housing Agreement for City review and approval. The comment does not identify any specific areas where the commenter believes the Draft EIR analysis is inadequate. Therefore, no further response is required. However, the commenter's interest in providing affordable housing is noted and forwarded to the decision makers for their consideration.

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Comment Letter 41

From: Pat Friday <patfriday@comcast.net>
Sent: Monday, November 8, 2021 9:56 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter project comment

Hello Planning Department folks,
I am writing to encourage you to proceed with the Hunter Project, but only with the affordable housing aspect. We need worker housing so badly here. Please do not accept a monetary offset, but insist that housing is provided for those who work here. 41-1

I'm sure you can find a way to offset water use, and other objections being raised. We need this new housing to give our town a boost too. 41-2

Thank you for considering my view,
Pat Friday

From: Pat Friday <patfriday@comcast.net>
Sent: Monday, November 8, 2021 1:27 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: Re: [External] Hunter project comment

Hello Maya,

Ack, in my email below, while trying to edit, it came out wrong!
The first sentence should read:
I am writing to encourage you to proceed with the Hunter Project, especially with the affordable housing aspect. 41-3

Please correct this, for the record.
Thank you,
Pat

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Response to Letter 41
Pat Friday
November 8, 2021

41-1 The comment expresses support only for the affordable housing component of the Project.

The commenter's support of the affordable housing component is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required.

41-2 The comment acknowledges water use considerations and general opposition to the Project; but indicates additional housing is needed and would support the City.

The commenter's opposition to the Project but support for additional housing is noted and forwarded to the decision-makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required.

41-3 The comment includes a correction to Comment 41-1. The comment is requesting an edit to Comment 41-1 to clarify that the commenter is encouraging the City to proceed with the Project, specifically the affordable housing component.

The commenter's support of the Project, including the affordable housing component is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required.

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Comment Letter 42

From: Pat Friday <patfriday@comcast.net>
Sent: Monday, November 8, 2021 1:40 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter project comment

Hello Planning Department folks,
I am writing to encourage you to proceed with the Hunter Project, especially with the affordable housing aspect. We need worker housing so badly here in St. Helena. Please do not accept a monetary offset, but insist that worker housing be built and provided for those who work here. 42-1

I am sure you can find a way to offset water use, and other objections being raised. 42-2

We need this new housing to give our town a boost too.

Thank you for considering my view,
Pat Friday

Pat Friday
1430 Walls Court
St. Helena CA 94574
707.484.4579

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Response to Letter 42
Pat Friday
November 8, 2021

42-1 The comment expresses support for the Project and the affordable housing component of it. The commenter states that worker housing is needed in the City.

The commenter's support for the Project and desire for affordable housing is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required.

42-2 The comment acknowledges water use considerations and general opposition to the Project; the commenter states that the additional housing would support the City.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

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Comment Letter 43

Tuesday, January 4, 22

Public Comment on Draft EIR for the Hunter Subdivision Project (Water Supply Discussion Only)

Undersigned's comments are confined to the water supply discussion in the Draft Environmental Impact Report ("EIR"). They address factual matters and also comment on the applicant's "water neutrality" presentation. 43-1

1. Draft EIR page 3.13-3: the statement is made that "Average historical yield from the [Bell Canyon] reservoir is approximately 1,800 acre-feet per year." Yet, Table 3.13-1 shows potable water deliveries ranging in water years' 2013-20 from a high of 927 AFY (2013) to a low of 643 AFY (2016). In short, the "average historical yield," assuming "historical yield" means historical deliveries, is less than one-half of the 1,800 AFY asserted textually on page 3.13-3. 43-2

As a matter of historical interest, deliveries from Bell Canyon reservoir were much higher in the twenty-year period ending in 2007. But the City was not meeting its State permit-imposed bypass obligations in those years. As documented in the Baseline Report of the Water & Sewer Infrastructure Subcommittee ("Subcommittee Report") of the General Plan Update Steering Committee (June 24, 2010), page 5, the City overdrew the reservoir by on average 525 AF yearly in the period 1988-2007. (The Subcommittee's Report was thoroughly vetted by City Staff and was presented to the Council with no disagreement as to its factual statements.) 43-3

The subsequent steep drop in annual deliveries from the reservoir is largely attributable to the City's coming into compliance with its State permit-imposed bypass obligations. The EIR statement at page 3.13-4 is euphemistic: "In recent years, the annual yield from Bell Canyon Reservoir has declined significantly due to required water releases into the Napa River to support fish habitat and also from drought conditions." Rather, as stated in the 2010 Subcommittee Report, the releases came about in and since 2008 (not "recent") and came about due to a City policy change to abide by State bypass obligations. As the Draft EIR on page 3.13-6 indicates, Napa purchased water that was 43-4 43-5

1

expected to augment overall potable water supply basically did no more than replace water previously misappropriated from Bell Canyon. 43-5 Cont.

In fact, the historical yield of Bell Canyon varies greatly with rainfall in any given water year. This is documented on page 4 of the Subcommittee's Report. "Averages" conceal wide fluctuations in Bell Canyon productivity. The issue, long recognized, is the City's difficult water supply situation in successive (especially more than two) dry or very dry years. *See* discussion of Safe Yield Report, point 5 below. 43-6

2. Draft EIR page 3.13-3: the statement is made that "the City is authorized to divert and store 3,800 acre-feet from Bell Canyon Reservoir each year." This is incorrect. Correctly stated, the City's storage right is 1,800 AF – and NOT 3,800 AF. 43-7

The City's storage "right" was the subject of significant discussion among the undersigned, City Staff, and the Napa Local Agency Formation Commission ("Napa LAFCO") in fall 2020. Napa LAFCO, with the City's concurrence, in its Napa County Water and Wastewater Municipal Service Review Final ("Napa MSR Final" (November 2, 2021)), correctly states (in revision of the prior draft), on page 215: "Bell Canyon Reservoir is owned and operated by the City and has a storage capacity of 2,350 af, of which the City has a storage right of 1,800 af." 43-8

The 2010 Subcommittee Report, page 4, also correctly states the City's storage right. "The maximum amount that the City is allowed to **divert to storage** in any one year is 1,800 acre-feet." (Bolding in original) Again, the City approved this statement, after thorough discussion including with the undersigned, in spring 2010 prior to publication of the Subcommittee Report on June 24, 2010. 43-9

The 3,800 AF comes about by combining the storage right in State Permit 9157 (1,800 AF) and the forecasted additional storage right in State Permit 14810 (2,000 AF). Permit 14810 authorized the raising of the dam at Bell Canyon from 75 feet to 105 feet, which would have added 2,000 AF of new storage, but the dam was not raised, and the additional storage right was not earned. In consequence the City's storage right has remained at 1,800 AF, as set forth in Permit 9157. 43-10

2

3. Draft EIR pages 3.13-5 to 3.13-7 discuses Napa City's sources of water. This discussion is not relevant. As noted on EIR page 3.13-4, the City of St. Helena has a "take-or-pay" contract with the City of Napa. This means that our City in indifferent to Napa City's sources of water. Napa must supply the City's contracted-for water no matter what supply difficulties it may be experiencing with its own sources of water (including curtailed deliveries from the State Water Project). 43-11

4. Draft EIR page 3.13-7: the statement is made: "The City currently restricts the use of groundwater from [the Stonebridge Well Complex] with goal of limiting extraction to 450 AF per year for long term sustainability." The source of this statement is page two of the March 2011 Safe Yield Report. In general, the City's sourcing strategy has been to take the 600 AF from Napa, produce what it can from Bell Canyon consistently with satisfying its bypass obligations, and meet the remainder of potable water demand from its two production wells at the Stonebridge Well Complex. Table 3-13-1 shows annual well production in water years 2013-2020. It has on average been significantly less than 450 AFY, ranging from a high of 400 AFY (2013) to a low of 240 AFY (2019). To undersigned's understanding, the reasoning behind this strategy is to limit groundwater production as much as possible due to environmental concerns for the Napa River, which is a gaining river in our area (which means that groundwater helps to sustain flows in the river). In short, the City since 2011 has achieved a long-term average significantly below 450 AFY. 43-12 43-13

Having said that, the City delivered 576 AF from the Stonebridge Well Complex in the water year ending June 30, 2021, per monthly Water Report for June 30, 2021, posted in the Public Works section of the City's website under "Water." This represents 34.6% of total water year deliveries. This is significantly more on an absolute basis and also on a percentage basis than the City has produced at the Stonebridge Well Complex in any past water year going back to 1992, when the first of the Stonebridge production wells was completed. Undersigned's personal view is that production in this substantial amount will prove to be not sustainable. 43-14

5. Draft EIR page 3.13-8: the EIR presents Table 3.13-7, entitled "City of St. Helena Safe Yields." The Table in column 2 presents a total 43-15

3

normal water year safe yield of 1950 AF. The Safe Yield Committee presented this number in the Report of the Safe Yield Committee (March 17, 2011). As stated in its Report, page 3, the Committee calculated the *net* safe yield, after taking into account "unavailable water," at 1658 AF. ("Unavailable water" is the volumetric difference between metered water deliveries at delivery sources – Bell Canyon, City Wells, Napa Water Delivery Point in Rutherford -- and metered water deliveries to customers. There are a number of factors that account for lesser metered sales' volumes than metered input volumes from the City's three sources of water, with system distribution leaks likely playing a significant part in accounting for the difference.)

43-15 Cont.

The "net safe yield" represents the Safe Yield Committee's assessment (in 2011) as to the water quantity available for sale while meeting the definition of "safe yield" as defined by the Safe Yield Committee (and subsequently adopted by the Council.) As defined by the Committee, the "safe yield" is the quantity of water needed to supply the City through most rainfall years, including a dry year, without water shortage restrictions. The Committee's definition continued: "It is recognized that the safe yield, as so defined, could place significant hardship on water customers in a Critically Dry Year (rainfall at 21.9 or less) or in periods of two or more Dry Years."

43-16

As important, there have been supply changes since the Safe Yield Committee did its work more than ten years ago that could affect the "safe yield" calculation. In particular, Bell Canyon may have been less productive than the Committee modeled. The Safe Yield Committee assumed that the Water Enterprise would purchase 200 AF (over the 600 AF) of option water when available; in the last decade there has been no purchase of Napa contract option water. At the same time, the City has benefitted from changes in the Napa contract, especially the yearend 2011 contract amendment. The City also appears to be under environmental and legal pressure to reduce pumping from the Stonebridge Well Complex. The basic point here is that the City should undertake a re-assessment of the "safe yield' and "net safe yield" of its potable water delivery system.

43-17

43-18

Indeed, the Safe Yield Report concludes: "the City should re-determine the usage/supply balance at the end of each fiscal year in the

43-19

4

ordinary course of business at the Water Enterprise. This will require recalculation each year of the forward-rolling, five-year average total potable water usage. It should also take into account any changes in supply conditions." The EIR does not cite to work subsequent to 2011 along these lines by the City.

43-19 Cont.

6. Draft EIR page 3.13-8: the statement is made that "the Louis Stralla Treatment Plant (WTP) is "located on Crystal Springs Road in the northeastern part of the City [citations omitted]." The WTP is located on Crystal Springs Road, but it is not within contiguous City limits in what would generally be understood as "the northeastern part of the City," namely City limits near Deer Park Road and Silverado Trail. Rather, the WTP, while in City limits, is northeast of contiguous City limits and is surrounded on all sides by Napa County lands. See Figure 1.3, NAPA MSR Final. (Following a convincing documentary showing by LAFCO in the final phases of the draft MSR in the fall of 2020, the City advised undersigned that it would revise City maps to show that the City-owned land at Bell Canyon reservoir is within City limits.) Succinctly, Bell Canyon sits on City land, within City limits, which is an island surrounded by County lands.

43-20

7. On page 3.13.10 the EIR, in the last bullet point on that page, notes that the 2010 Water Supply Plan recommended, among other recommendations, "a water rate structure that will ensure adequate program funding while encouraging water conservation by accounting for reduced water consumption in the base water rate and increasing high-tier rates." Unfortunately, this recommendation was not consistent with the subsequently decided decision in *Capistrano Taxpayers Assn. v. City of San Juan Capistrano*, 235 Cal.App.4th 1493, modified (with no change in judgment), 236 Cal.App.4 th1123a (2015). The California Supreme Court denied review, and the *Capistrano* case became the accepted law in California. In accordance with the *Capistrano* case, the City (like many California cities) abandoned tiered rates in its last (2016) rate increase, bringing its rate structures into compliance with State Proposition 218 as interpreted and implemented by the *Capistrano* case. In consequence, it is not possible to incentivize conservation through tiered rates whereby higher volume customers pay more per unit of consumption.

43-21

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8. A comment on the Municipal Code Section 13.12.030, discussed at Draft EIR pages 3.13-21/22 & 3.13-24/25 ("water neutrality" issue). As the applicant states, City policy requires that new development offset completely its potable water use. The applicant estimates annual indoor water demand at 20 AFY (rounded). This is not a small amount to offset through off-site water efficiency improvements.

The Municipal Code (section 13.12.030D) places the burden on the applicant-developer to identify properties eligible for retrofitting. Ideally, the developer should not be able to shift the burden of offsetting new water use through an in-lieu fee from itself to the City. Rather, certificates of occupancy should not issue unless and until the developer shows that it has effectively offset the potable water usage of new housing units at the time it seeks occupancy permits.

43-22

In EIR Appendix J, applicant's "Water Neutral Report," prepared by RSA+, a civil engineering firm, RSA+ calculates that 333 off-site residences would need to be retrofitted with water-saving fixtures to achieve an annual off-set savings of 20 AF, calculating the total cost (labor and materials) at $600,000 (rounded). In its conclusion RSA+ seems to recognize the impracticality of locating and retrofitting such a large number of residences on the City's potable water system.

The RSA+'s conclusion states: "The offset of the water project demands may *best* be met through assisting the City of Sr. Helena with existing water system improvements via in-lieu fees. The project will pay $596,808 as an in lieu fee equal to the cost of retrofitting enough residences with low flow fixtures to achieve savings equal to the proposed use." Italics added.

43-23

In short, the applicant appears to be proceeding on the premise that the Council, as it has discretion to do under the Municipal Code (section 13.12.030B), will accept an in-lieu fee, equal to the cost of residential water efficiency upgrades, in place of the upgrades themselves.

In my opinion it is reasonable to conclude that retrofitting 333 off-site residences is "impractical," which is a basis for Council acceptance of an in-lieu fee under the Municipal Code (section 13.12.030B). At this

43-24

juncture, with the water efficiency program in place for many years, it would appear to be both difficult not just to locate a sufficient number (333) of residences in need of water efficiency upgrades and also to persuade eligible residents to undertake paid-for water efficiency improvements. There are no doubt administrative issues for both the developer and the City that would make such a large retrofit program difficult to accomplish successfully. Based on my own experience with our (thinly) staffed City Government, I am skeptical, to put the matter mildly.

43-24 Cont.

But there also appears to be a disconnect between the $600,000 in-lieu fee proffered by the applicant, calculated by the applicant in Appendix J as the total cost (labor and materials) of retrofitting 333 residences, and the in-lieu fee necessary to accomplish a reduction of 20 AFY through improvements in the City's water distribution system. It does not equate to say that if the City spends $600,000 on water distribution improvements, it will in fact achieve 20 AF in annual potable water savings. The goal of the water neutrality policy is to ensure neutrality is achieved, and indeed achieved commensurate with the time that the water system must respond to the new demand. Hence the City needs to identify a specific system improvement or improvements that will in fact offset the 20 AFY in new development usage. This statutory requirement is not achieved by allowing an in-lieu fee with no shovel-ready, offsetting improvements ready to go.

43-25

Then there is the further question of the amount of the in-lieu fee, if the Council decides to accept an in-lieu fee. The Municipal Code (section 13.12.030B) reads: "If the city council determines that retrofitting existing residential or nonresidential buildings is impractical or constitutes an unusual hardship on an applicant, it may authorize the payment of to the city of an in-lieu retrofit fee in lieu of complying with the requirements of subsection A of this section." Subsection A deals with the calculation of the number of retrofits. It is silent on the calculation of the in-lieu fee. The Council appears to have unfettered authority in fixing the amount of the fee. Assuming this is correct, the fee should be in an amount sufficient to pay for system improvements that in fact accomplish an offsetting 20 AFY reduction.

43-26

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For example, if a system improvement to achieve a 20 AFY offset costs $1,250,000, then that should be the amount of the fee. Conversely, if a system improvement to achieve a 20 AFY offset costs $250,000, then that should be the amount of the fee. If a system improvement results in more than a 20 AFY reduction, then it may be appropriate for the Water Enterprise (ratepayers) to share in the cost, such that the applicant is paying a ratable amount equal to the cost of achieving a 20 AFY reduction. Now, it may be difficult, perhaps impossible, to quantify water savings associated with a specific system improvement, especially improvements designed to reduce unmetered losses in the distribution system ("unavailable water"). Still, the objective in accepting an in-lieu fee is ensuring that the new usage (20 AF) is completely offset, and the applicant should bear the burden of that cost, whatever it is.

43-27

9. The applicant assumes that it can lawfully satisfy landscaping water demand through a well on the applicant's property. This may well be correct, but it may not be a complete given. The County's Groundwater Sustainability Agency ("GSA") is addressing the issue of groundwater withdrawals (diversions), with GSA approval of the Groundwater Sustainability Plan ("GSP") due by January 31. 2022. (That is not the end; the State Department of Water Resources ("DWR")) will then be review and approved/disapproved the GSP within the following two years.) The City, Planning Commission, and/or City Council should review the applicant's proposed groundwater usage for conformity with the GSP following GSA approval of the GSP in early 2022.

43-28

Respectfully submitted,

Alan Galbraith

Member, GSPUC Water & Sewer Infrastructure Subcommittee, 2009-10
Member, Safe Yield Committee, 2010-11
Member, Groundwater Resources Advisory Committee, 2011-14
St. Helena Mayor, 2014-18

Member, Groundwater Sustainability Plan Advisory Committee, 2020- to date

Response to Letter 43
Alan Galbraith
December 9, 2021

43-1 The comment notes that the points raised in the letter are specific to the water supply discussion and address factual issues as well as the Project applicant's water neutrality proposal.

Please see Master Response 2. The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no further response is required.

43-2 The comment refers to information specific to the average historical yield from the Bell Canyon reservoir and potable water deliveries available to the City and questions the accuracy of the information provided.

The reported average historical yield of 1,800 acre-feet per year is the accurate figure that was used in the Draft EIR for the 2040 St. Helena General Plan Update and was based on reporting by Luhdorff and Scalmanini in their Groundwater Sustainability Report in 2016 (found here: https://www.napawatersheds.org/managed_files/Document/8266/Napa%20Valley%20Subbasin%20Basin%20Analysis%20Report_2016_sm.pdf). This reported historical average is not be confused with the more recent numbers that are listed in Table 3.13-1 of the Draft EIR. The more recent average is indeed much less than the historical average as reported by Luhdorff and Scalmanini in 2016.

43-3 The comment cites to a technical document prepared by the city's Water and Sewer Infrastructure Committee that address deliveries to Bell Canyon reservoir prior to 2007.

Please see Master Response 2. The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no further response is required.

43-4 The comment is referring to why there was a decline in water deliveries to Bell Canyon (after 2007) due to compliance with state permit requirements.

Please see Master Response 2. The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no further response is required.

43-5 The comment refers to information in the Draft EIR noting that Napa County purchased water that was expected to add to the overall water supply but ended up only replacing water that had been misappropriated.

Please see Master Response 2. The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no further response is required.

43-6 The comment is noting that the historical yield of Bell Canyon reservoir fluctuates annually depending on rainfall amounts and cites to a report prepared by the city's Water and Sewer Infrastructure Committee. This challenges the City to supply water during successive dray water years.

Please see Master Response 2. The comment does not identify any specific areas where the EIR or analysis is inadequate. Therefore, no further response is required

43-7 The comment states information in the Draft EIR addressing the amount of water the City is authorized to divert and store is incorrect.

The commenter correctly notes that the amount of water the City is authorized to divert and store from Bell Canyon Reservoir is 1,800 acre-feet or AF. The Draft EIR text on page 3.13-3 will be corrected to read 1,800 AF and is included in Chapter 3, Changes to the Draft EIR. Note that the water supply analysis (see Impact 3.13-2 on p. 3.13-31), does not rely on either the 3,800 AF number or 1,800 AF. The analysis uses the more conservative "safe yield" of 1,000 AF for a normal dry year (see Table 3.13-7). Therefore, this comment does not result in any change to the impact analysis and significance finding.

43-8 The comment is providing background on the storage capacity of Bell Canyon reservoir and the amount the City's storage rights.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. See Response to Comment 43-7. No further response is required.

43-9 The comment is referring to a 2010 Subcommittee Report which notes the City's storage right of 1,800 AF.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. See Response to Comment 43-7. No further response is required.

43-10 The comment describes where the 3,800 AF amount was derived from and references Permit 14810 that authorized raising the dam at Bell Canyon reservoir to 105 feet to permit more water storage.

Please see Response to Comment 43-7. The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no further response is required.

43-11 The comment dismisses the need to discuss the City of Napa's water sources and states it is not relevant because the City has a "take or pay" contract with the City of

Napa so the source of the City of Napa's water is of no consequence to the City of St. Helena.

The commenter's opinion regarding the information contained in the environmental setting for water supply source in Section 3.13, Utilities and Service Systems is noted. The information provided in the Draft EIR regarding the City of Napa's water sources is provided because the City of St. Helena has a contract with the City of Napa for water and this is part of the environmental baseline.

43-12 The comment refers to the amount of groundwater the City obtains from the Stonebridge Well Complex.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no further response is required. Please see Master Response 2 for additional information.

43-13 The comment explains why the City limits extracting groundwater from the Stonebridge Well Complex to minimize impacting the Napa River

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no further response is required. Please see Master Response 2 for additional information.

43-14 The comment indicates that based on information provided on the City's website, the City has increased its allotment of groundwater from the Stonebridge Well Complex by approximately 35% in 2021, which the commenter opines is not sustainable.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, no further response is required. Please see Master Response 2 for additional information.

43-15 The comment references Table 3.13-7 in the Draft EIR and compares the information in this table to information provided by the Safe Yield Committee.

The comment does not draw any conclusions or question the data provided in Table 3.13-7 (DEIR p. 3.13-8). Therefore, because the comment does not identify any specific areas where the Draft EIR is inadequate, no further response is required. Please see Master Response 2 that addresses water supply.

43-16 The comment discusses the 'net safe yield' as defined by the Safe Yield Committee and notes that this net safe yield could affect the availability of water during critical dry years.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. Please see Master Response 2 for additional information.

43-17 The comment addresses changes that could affect the 'safe yield' calculation due to changes in water availability.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. Please see Master Response 2 for more information on water availability.

43-18 The comment suggests that the City is under "environmental and legal pressure" to reduce groundwater pumping from the Stonebridge Well Complex and suggests that the City should reassess the 'safe yield' and 'net safe yield' water assumptions.

The comment does not identify any specific areas where the EIR or analysis is inadequate; therefore, no further response is required. Please see Master Response 2 for additional information.

43-19 The comment references conclusions of the Safe Yield Report which requires annually recalculating the average total water usage and account for changes in water supply. The comment notes the Draft EIR does not cite work prior to 2011 that speaks to these conclusions.

Water supply deliveries for the years 2013 through 2020 are included in Table 3.13-1 on page 3.13-3 of the Draft EIR.

43-20 The comment states the Draft EIR incorrectly characterizes the location of the Louis Stralla Treatment Plant as being within the City limits.

See Chapter 3, Changes to the Draft EIR for a text change to page 3.13-8 of the Draft EIR to more accurately describe the location of the water treatment plant. This text change does not affect the analysis of this issue in the Draft EIR.

43-21 The comment opines that a recommendation from the City's 2010 Water Supply Plan is not consistent with a 2015 court case that eliminated the ability to use tiered rates to incentivize water conservation.

The referenced bullet point in the Draft EIR on page 3.13-10 is merely providing background information related to the 2010 Water Supply Plan and recommendations that were contained within that document. The analysis within the Draft EIR does not rely on whether the referenced recommendations have legal viability. However, the comment is noted and forwarded to the decision makers for their consideration.

43-22 The comment opines that the Project's water demand of 20 AFY (rounded up) is not a small amount to be offset through water efficiency improvements.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. However, Master Response 2

addresses the Project's compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

43-23 The comment is referencing the Project applicant's Water Neutral Report, included as Appendix J and notes that retrofitting 333 off-site residences or paying an in-lieu fee would meet the requirements of the City's policy.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. However, Master Response 2 addresses the Project's compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

43-24 The comment opines that payment of the in-lieu fee would be more practical than trying to find 333 residences to retrofit.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. However, Master Response 2 addresses the Project's compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

43-25 The comment states a concern that payment of an in-lieu fee without identifying where that money would be spent to off-set the Project's increase in water demand is needed for the City to meet the intent of the policy.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. However, Master Response 2 addresses the Project's compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

43-26 The comment addresses how the City calculates the in-lieu fee and notes the fee should be in an amount that is sufficient to off-set a 20 AFY increase in water demand.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. However, Master Response 2 addresses the Project's compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

43-27 The comment states an opinion that the in-lieu fee be sufficient to off-set the Project's increase in water demand to meet the intent of the City's Water Neutral Policy.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. However, Master Response 2 addresses the Project's compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

43-28 The commenter notes the Project intends to use the existing well for landscaping but states that the County's Groundwater Sustainability Plan (GSP) has not yet been adopted by the County, Department of Water Resources, or the City.

The Project is proposing to use the on-site agricultural well for all public and private landscape irrigation. As discussed in the Draft EIR on page 3.9-42, the total water demand of the Proposed project that would likely be sourced from groundwater including both the onsite well and water that would be supplied from the Stonebridge Complex would only represent 0.9% increase in demand. Of that, the water from the onsite well would be less than half that amount. Otherwise, the GSP for the Subbasin which has not yet been completed, as the comment notes, and suggesting that there could be a potential conflict with that document would be considered conjecture which is outside the scope of CEQA. However, as stated on page 3.9-40 of the Draft EIR, in a recent assessment of the groundwater conditions, Napa County and its technical consultant have determined that the Subbasin is not exhibiting significant and unreasonable impacts with regard to the applicable sustainability indicators defined by the Sustainable Groundwater Management Act (SGMA). As a result, there is sufficient evidence to support a conclusion of a less-than-significant impact related to use of the onsite groundwater well.

Comment Letter 44

-----Original Message-----
From: Dottie Gingerelli <dgingerelli@comcast.net>
Sent: Saturday, October 30, 2021 2:50 PM
To: Xinia Gamero <XGamero@cityofsthelena.org>
Subject: [External] Hunter Project

Hello Ms. Gamero,

Along with all the arguments against the Hunter Project such as severe water scarcity, increased global warming with more gas vehicle emissions, destroying an established in-place bike/walkability access to grocery stores, the pharmacy and downtown shopping, essential to cities for their citizens and businesses. 44-1

I'd like to submit the issue of safety for seniors at Vineyard Valley and all local First Responders.
Presently, half the senior residents of VV Park evacuate to the main drive to the South exit of the park onto Pope St., while all First Responders enter into VV on the right side of the entrance driveway, off of Pope St. safely passing each other.
The other half of VV residents exit to the trail at the north end of the park, where the Hunter Project is under consideration.
Without that North access, all senior residents of VV Park will be forced to get onto the main drive at the same time, going the same way. Time is of the essence! 44-2
If an evacuation order were in effect again, the senior residents could possibly be stranded in a fire evacuation and First Responders would be hindered in their ability to evacuate the park and start protective measures. A life and death situation is very possible for both the senior residents and the First Responders. Delays could prove deadly!

I also have a question. If a loss of life should occur because of the passing of this project, would the city be prepared for probable lawsuits for their actions limiting access to safety for senior residents and First Responders? 44-3

Thank you,
Dottie Gingerelli
50 Laguna Seca Ct.
St. Helena, CA 94574
dgingerelli@comcast.net

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Response to Letter 44
Dottie Gingerelli
October 30, 2021

44-1 The comment generally mentions the Project's potential impact to water supply, vehicle emissions, and bicycle and pedestrian facilities.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

44-2 The comment expresses concern related to emergency evacuation for Vineyard Valley residents.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, emergency evacuation was analyzed Section 3.14 of the Draft EIR and Project impacts were concluded to be less than significant. Please also see Master Response 1, for more details related to emergency evacuation for both Vineyard Valley residents and Project residents.

44-3 The comment poses a question related to the potential loss of life due to the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

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Comment Letter 45

Honorable Planning Commission Chair and Commissioners,

As you review the Hunter Project, it is important to note the long and complicated history of this project and the behaviors of this Santa Rosa Casino Development Applicant. During the decade long history, the applicant has sued the city multiple times, forced the city to construct the levee around his property (by refusing to allow access for the flood protection of the senior community of Vineyard Valley), refused to supply documentation on numerous items requested by city staff such as movement of tons of soil, updated soil testing and maps, affordable housing plans that comply with the St Helena Housing Ordinance, Density bonus plans and any specific information regarding the size, bedrooms, bathrooms, etc. for each housing unit which is necessary to calculate traffic, water use, etc. 45-1

The project violates the HCD approved St Helena Housing Element in numerous ways including the continued segregation of low income housing, the requirement that the affordable housing must be spread throughout the project., and must be "for sale" as well as apartments. St Helena has illustrated distinct and repeated actions that segregate low income housing from market rate neighborhoods – as evidenced by 98% of ALL affordable and multi-family housing being placed on the East side of St Helena. 45-2

It has created an undeniable "other side of the tracks" situation, and despite the claim that the land is more affordable on the East Side, the State of California does not accept that as a waiver of the law. In fact, that exact argument serves to aggravate the segregation of neighborhoods by conveniently ruling out the possibility for any diverse housing or socioeconomic and racial diversity in those neighborhoods. 45-3

Not only does this project propose 25 new units of affordable restricted housing on the East Side, it is designed specifically to place the affordable apartments immediately adjacent to the existing multi-family housing along Adams rather than distributing it through the rest of the market rate housing as is required by other St Helena Housing Element and laws. 45-4

Attached is a professional perspective from a housing segregation expert describing the situation in St Helena. 45-5

The city and you personally, stand to face discrimination claims, and lawsuits if you continue to make decisions in violation of the St Helena ordinances as well as the State's laws by perpetuating the long pattern of housing and racial segregation in St Helena. To date, realtors in St Helena list housing on the West Side of town as "preferred side of town" or "the desirable West Side". Even realtors know exactly what has been done and use it to realty sales advantage. 45-6

You are now informed, and with a full read of the St Helena ordinances, zoning codes 17.144 and 17.146, the Housing Element and General Plan as well as new California laws to prevent housing discrimination and segregation, citizens should be assured that you will do what is required by law, and not put the city or yourselves at risk for litigation and embarrassment of being an ongoing segregated city. Do not give this Santa Rosa developer who has no interest in following our laws put us in an embarrassing and legal situation for his own personal financial gain. 45-7

You will certainly hear from the applicant that he is "helping St Helena housing", when in fact this project will provide a mere 5 units of very low income housing and the previously proposed affordable housing second units (ADU's) will be above moderate - which is simply market rate. So in what sense does this enormous subdivision, that is wholly reliant on our levee where we have full liability, causes unmitigable traffic at one of the ONLY exits out of the city, eliminated the proposed Adams St extension 45-8

to the Trail, further segregates our city, and exacerbates our ongoing severe water shortages helpful to us? Please do not play his game. Please stand up to protect this city, its resources, its liability and its integrity. If not you, then who?

45-8 Cont.

Thank you.

Sincerely,
Diane Green
Daniel Wheaton
Mark Arnett
Carl Barnes
Gary Oncina
James Pelligri

Response to Letter 45
Diane Green, Daniel Wheaton, Mark Arnett, Carl Barnes, Gary Oncina, James Pelligri

45-1 The comment states that it is important to note the history of the Project and actions by the Project applicant, including litigation and refusal to supply documentation requested by City staff.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

Please see Responses to Comments 45-2 and 45-4 regarding compliance with the City's Inclusionary Housing Ordinance and Response to Comment 84-3 regarding the density bonus.

45-2 The comment states that the Project violates the "HCD-approved" St. Helena Housing Element through the segregation of low-income housing from market rate housing and not spreading the units throughout the Project site and including units for sale.

The comment does not address the adequacy of the Draft EIR, but instead expresses the commentor's opinion about the project. However, as part of the applicant's future Affordable Housing Agreement proposal, as required under the City's Inclusionary Housing Ordinance, there must be demonstration that the Project be consistent with the City's Affordable Housing Ordinance and be "spread throughout the Project" (Municipal Code 17.146.050 (I)). Housing Element Implementing Action HE4.A would require that affordability levels of inclusionary units in a project be "further distribut[ed] … within the various income categories." Any determination of compliance with the City's requirements for affordable or inclusionary housing will be made at the time that the applicant submits a formal application for an Affordable Housing Agreement. Such an Agreement will need to be approved by the City Council following the Tentative Subdivision Map approval but prior to the Final Map being recorded and before any development of homes can take place.

45-3 The comment suggests that the segregation of low-income housing from market rate neighborhoods only within the eastern area of the City limits the possibility for diverse housing and socioeconomic and racial diversity in those neighborhoods (in the western area of the city).

Please see Response to Comment 45-2. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

45-4 The comment opines that the Project strategically places the affordable units adjacent to the existing multi-family housing along Adams Street rather than distributing units throughout the rest of the market rate housing, as required by the St. Helena Housing Element.

Please see Response to Comment 45-2.

45-5 The comment references an article about housing segregation in St. Helena.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

45-6 The comment alleges that the City and Planning Commissioners may face discrimination claims and lawsuits due to housing and racial segregation by not requiring affordable housing in the western area of the City in violation of City ordinances and state law.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

45-7 The comment refers to Zoning Code sections 17.144 and 17.146, the Housing Element and General Plan as well as new California laws to prevent housing discrimination and segregation.

Please see Response to Comment 45-2. The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

45-8 The comment suggests that the Project does not propose enough affordable housing relative to the impacts on traffic, water supply, housing segregation, and liability due to flooding. The comment also references that the Project eliminates the proposed Adams Street extension connecting to Silverado Trail.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 2 regarding water to serve the Project and Master Response 3 that addresses concerns regarding the levee. The Proposed Project does not eliminate the future extension of Adam's Street connecting to Silverado Trail. The Project does not require Adam's Street be extended any farther east of Starr Avenue. Any extension of Adams Street connecting to Silverado Trail would require further study and approval by the City and is not required for this Project.

An attachment to this letter can be found in Appendix B

Comment Letter 46

From: Diane Green <dgreenhagg@gmail.com>
Date: Tue, Nov 2, 2021 at 2:04 PM
To: <planningcommission@cityofsthelena.org>, <cityclerk@cityofsthelena.org>

Honorable Planning Commission Chair and Commissioners,

As you review the Hunter Project, it is important to note the long and complicated history of this project and the undesirable behaviors of this Santa Rosa Casino Development Applicant. During the decade long history, the applicant has sued the city multiple times, forced the city to construct the levee around his property (by refusing to allow access for the flood protection of the senior community of Vineyard Valley), refused to supply documentation on numerous items requested by city staff such as movement of tens of tons of soil, updated soil testing and maps, affordable housing plans that comply with the St Helena Housing Ordinance, Density bonus plans and any specific information regarding the size, bedrooms, bathrooms, etc. for each housing unit which is necessary to calculate traffic, water use, etc. The EIR is insufficient because as stated by a Dudek Rep at the last Public meeting on this topic - "We cannot do an EIR without size of homes, bathrooms, etc. or any density bonus information." This is on tape. 46-1

The inadequacy of the EIR is also that the project violates the HCD approved St Helena Housing Element and our own housing laws 17.144 and 17.146. For example, the continued segregation of low income housing, the requirement that the affordable housing must be spread throughout the project, and must have some "for sale" units that are below market rate. 46-2

St Helena has illustrated distinct and repeated actions that segregate low income housing from market rate neighborhoods, as evidenced by 98% of ALL affordable and multi-family housing being placed on the East side of St Helena., and often in separate apartment projects.

It has created an undeniable "other side of the tracks" situation, and despite the claim that the land is more affordable on the East Side, the State of California does not accept that as a waiver of the law. In fact, that exact argument serves to aggravate the segregation of neighborhoods by conveniently ruling out the possibility for any diverse housing or socioeconomic and racial diversity ever in those neighborhoods because "it's too expensive for that. over here" Without City intervention and enforcement of our own anti-segregation requirements of projects like this to ensure a mix of housing types for variable income families, you contribute to maintaining a "put them in groups over there" kind of St Helena. 46-3

You can see that hte 25 new units of affordable restricted housing on the East Side is designed specifically to place the affordable apartments in a "project" immediately adjacent to the existing lower income multi-family housing along Adams rather than distributing it through the rest of the market rate housing AS IS REQUIRED by St Helena Housing Element, St Helena laws, ordinances as well as CA Statelaws against discrimination. And NONE are for sale which is also required. 46-4

Attached is a professional perspective from a housing segregation expert describing the situation in St Helena. 46-5

The city and you personally, stand to face discrimination claims and lawsuits if you continue the trend of decisions that violate of the St Helena stated goals and ordinances as well as the State's laws by 46-6

perpetuating the long pattern of housing and racial segregation in St Helena. We all know and see that realtors in St Helena list housing on the West Side of town as "preferred side of town" or "the desirable West Side". Even realtors know exactly what has been done, and use it to realty sales advantage. 46-6 Cont.

With a full read of the St Helena ordinances, zoning codes 17.144 and 17.146, the Housing Element and General Plan as well as new California laws to prevent housing discrimination and segregation, citizens should be assured that you will do what is required by law, and not put the city or yourselves at risk for litigation and embarrassment of being an ongoing segregated city. Do not give this Santa Rosa developer who has no interest in following our laws and actually does not want to work within our city's own clearly stated goals of changing from "the other side of the tracks" city where we put our diverse and lower income population into segregated projects. It's not who we are, so don't let this uber wealthy and questionable casino developer put us and you in an embarrassing and legal situation for his own personal financial gain. 46-7

You will no doubt hear from the applicant that he is "helping St Helena housing", when in fact this project will provide a mere 5 units of very low income housing. On top of that, the previously proposed 11 affordable housing ADU's (ADU's) will now be "above moderate" - which is simply a clever way to say market rate. 46-8

So in what sense does this enormous subdivision, that further segregates our city, is wholly reliant on our levee where we have full liability, causes unmitigable traffic at one of the ONLY exits out of the city, eliminated the proposed Adams St extension to the Trail in his plans, and exacerbates our ongoing severe water shortages helpful to us? Please do not play his game. Please stand up to protect this city, its resources, its liability and its integrity as a welcoming and diverse place to live. If not you, then who? 46-9

Thank you.

Sincerely,
Diane Green
Daniel Wheaton
Mark Arnett
Carl Barnes
Gary Oncina
James Pelligri

Response to Letter 46
Diane Green, Daniel Wheaton, Mark Arnett, Carl Barnes, Gary Oncina, James Pelligri
November 2, 2021

46-1 The comment states that it is important to note the history of the Project and actions by the Project applicant, including litigation and refusal to supply documentation requested by City staff. The comment further states the EIR is insufficient because it is not possible to do an EIR without knowing the size of homes and without any density bonus information.

The comment regarding the history of the Project and Project applicant is noted and forwarded to the decision makers for their consideration. Regarding the Draft EIR, the analysis used the assumption that single-family lots would range in size between 7,000 and 12,000 square feet with most lots in the 7,000 to 8,000 square foot range, and the attached multifamily housing units would comprise 30,000 to 45,000 total square feet of building area. The construction of these units would require approval by the planning commission and attached residential units would also require a conditional use permit. The Medium Residential (MR) zoning district also contains a density bonus that may be given for affordable housing projects; however, the applicant has not requested consideration of a density bonus as part of the Proposed Project application. This information is included within the Draft EIR. Therefore, no further response is required; and the comment is noted and forwarded to the decision makers for their consideration.

46-2 The comment opines that the Project violates the St. Helena Housing Element and housing laws 17.144 and 17.146 through the segregation of low-income housing from market rate housing and the lack of availability of “for sale” units listed below market rate.

Please refer to Response to Comment 45-2. Any determination of compliance with the City’s requirements for affordable or inclusionary housing will be made at the time that the applicant submits a formal application for an Affordable Housing Agreement. Such an Agreement will need to be approved by the City Council following the Tentative Subdivision Map approval but prior to the Final Map being recorded and before any development of homes can take place. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

46-3 The comment suggests that the segregation of low-income housing from market rate neighborhoods outside of the eastern area of St. Helena limits the possibility for diverse housing, socioeconomic and racial diversity in those neighborhoods. The comment also suggests that City intervention and enforcement of anti-segregation

requirements is necessary in order to ensure a mix of housing types for varying family incomes.

Please see Response to Comment 45-2. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

46-4 The comment opines that the 25 new affordable housing are specifically placed adjacent to the existing lower income, multi-family housing on Adams Street rather than placed among market rate housing, as required by City and state laws. The comment also states that none of these units are for sale which is also required by law.

Please refer to Response to Comment 45-2. Any determination of compliance with the City's requirements for affordable or inclusionary housing will be made at the time that the applicant submits a formal application for an Affordable Housing Agreement. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

46-5 The comment references an article about housing segregation in St. Helena.

The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

46-6 The comment suggests that the City and Planning Commissioners may face discrimination claims and lawsuits if violations to City ordinances and state law continue. The comment also suggests that realtors benefit from advertising the west side of St. Helena as preferred or more desirable.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

46-7 The comment states that the City should comply with its ordinances, the Zoning Code, the Housing Element and General Plan as well as new state laws to prevent housing discrimination and segregation. The comment further states that the Project Applicant has no intention to follow laws or contribute to the City's goal of minimizing housing segregation.

Please refer to Response to Comment 45-2. Any determination of compliance with the City's requirements for affordable or inclusionary housing will be made at the time that the applicant submits a formal application for an Affordable Housing Agreement. The comment does not identify any specific areas where the Draft EIR

analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

46-8 The comment states that the Project Applicant will claim he is helping the housing situation in the City when he is only providing five units of very low income housing and the ADUs will be at market rate.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

46-9 The comment opines that the Project would not help the City because it would further segregate the City and result in impacts related to traffic, water supply, and liability to flooding. The commenter asks the Planning Commissioners to protect the City.

The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

An attachment to this letter can be found in Appendix B.

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Comment Letter 47

From: Diane Green <dgreenhagg@gmail.com>
Sent: Tuesday, November 2, 2021 2:05 PM
To: Planning Commission <PlanningCommission@cityofsthelena.org>; cityclerk <cityclerk@cityofsthelena.org>
Subject: [External] Hunter Project Public Comments and DEIR input

Honorable Planning Commission Chair and Commissioners,

As you review the Hunter Project, it is important to note the long and complicated history of this project and the behaviors of this Santa Rosa Casino Development Applicant. During the decade long history, the applicant has sued the city multiple times, forced the city to construct the levee around his property (by refusing to allow access for the flood protection of the senior community of Vineyard Valley), refused to supply documentation on numerous items requested by city staff such as movement of tons of soil, updated soil testing and maps, affordable housing plans that comply with the St Helena Housing Ordinance, Density bonus plans and any specific information regarding the size, bedrooms, bathrooms, etc. for each housing unit which is necessary to calculate traffic, water use, etc. 47-1

The project violates the HCD approved St Helena Housing Element in numerous ways including the continued segregation of low income housing, the requirement that the affordable housing must be spread throughout the project., and must be "for sale" as well as apartments. St Helena has illustrated distinct and repeated actions that segregate low income housing from market rate neighborhoods – as evidenced by 98% of ALL affordable and multi-family housing being placed on the East side of St Helena. It has created an undeniable "other side of the tracks" situation, and despite the claim that the land is more affordable on the East Side, the State of California does not accept that as a waiver of the law. In fact, that exact argument serves to aggravate the segregation of neighborhoods by conveniently ruling out the possibility for any diverse housing or socioeconomic and racial diversity in those neighborhoods. 47-2

Not only does this project propose 25 new units of affordable restricted housing on the East Side, it is designed specifically to place the affordable apartments immediately adjacent to the existing multi-family housing along Adams rather than distributing it through the rest of the market rate housing as is required by other St Helena Housing Element and laws. 47-3

Attached is a professional perspective from a housing segregation expert describing the situation in St Helena. 47-4

The city and you personally, stand to face discrimination claims, and lawsuits if you continue to make decisions in violation of the St Helena ordinances as well as the State's laws by perpetuating the long pattern of housing and racial segregation in St Helena. To date, realtors in St Helena list housing on the West Side of town as "preferred side of town" or "the desirable 47-5

West Side". Even realtors know exactly what has been done and use it to realty sales advantage.

47-5 Cont.

You are now informed, and with a full read of the St Helena ordinances, zoning codes 17.144 and 17.146, the Housing Element and General Plan as well as new California laws to prevent housing discrimination and segregation, citizens should be assured that you will do what is required by law, and not put the city or yourselves at risk for litigation and embarrassment of being an ongoing segregated city. Do not give this Santa Rosa developer who has no interest in following our laws put us in an embarrassing and legal situation for his own personal financial gain.

47-6

You will certainly hear from the applicant that he is "helping St Helena housing", when in fact this project will provide a mere 5 units of very low income housing and the previously proposed affordable housing second units (ADU's) will be above moderate - which is simply market rate. So in what sense does this enormous subdivision, that is wholly reliant on our levee where we have full liability, causes unmitigable traffic at one of the ONLY exits out of the city, eliminated the proposed Adams St extension to the Trail, further segregates our city, and exacerbates our ongoing severe water shortages helpful to us? Please do not play his game. Please stand up to protect this city, its resources, its liability and its integrity. If not you, then who?

47-7

Thank you.

Sincerely,
Diane Green
Daniel Wheaton
Mark Arnett
Carl Barnes
Gary Oncina
James Pelligri

Response to Letter 47
Diane Green, Daniel Wheaton, Mark Arnett, Carl Barnes, Gary Oncina, James Pelligri
November 2, 2021

47-1 The comment states that it is important to note the history of the Project and actions by the Project applicant, including litigation and refusal to supply documentation requested by City staff.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

47-2 The comment opines that the Project violates the City's Housing Element through the segregation of low-income housing from market rate housing and the lack of availability of "for sale" units listed below market rate. The comment suggests that the segregation of low-income housing from market rate neighborhoods outside of the eastern area of the City limits the possibility for diverse housing, socioeconomic and racial diversity in those neighborhoods.

The comment does not address the adequacy of the Draft EIR, but instead expresses the commentor's opinion about the Project. Please refer to Response to Comment 45-2. Any determination of compliance with the City's requirements for affordable or inclusionary housing will be made at the time that the applicant submits a formal application for an Affordable Housing Agreement. Such an Agreement will need to be approved by the City Council following the Tentative Subdivision Map approval but prior to the Final Map being recorded and before any development of homes can take place. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

47-3 The comment opines that the 25 new affordable housing are placed adjacent to the existing lower income, multi-family housing on Adams Street rather than placed among market rate housing, as required by City and state laws.

Please refer to Response to Comment 45-2. Any determination of compliance with the City's requirements for affordable or inclusionary housing will be made at the time that the applicant submits a formal application for an Affordable Housing Agreement. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

47-4 The comment references an article about housing segregation in St. Helena.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

47-5 The comment opines that the City and Planning Commissioners may face discrimination claims and lawsuits if violations to City ordinances and state law continue. The comment also suggests that realtors benefit from advertising the west side of St. Helena as preferred or more desirable.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

47-6 The comment states that the City should comply with its ordinances, the Zoning Code, the Housing Element and General Plan as well as new California laws to prevent housing discrimination and segregation.

Please refer to Response to Comment 45-2. Any determination of compliance with the City's requirements for affordable or inclusionary housing will be made at the time that the applicant submits a formal application for an Affordable Housing Agreement. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

47-7 The comment opines only five units of very low income housing are provided and the ADUs will be at market rate. The comment suggests that the Project would not help the City because it would further segregate the City and result in impacts related to traffic, water supply, and liability to flooding. The commenter asks Planning Commissioners to protect the City.

As noted elsewhere in these Responses, any future Affordable Housing Agreement specifying the type and number of affordable housing units will be reviewed and approved at a future date. It is not correct that a specific number of very low income units has been proposed or approved. The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

Comment Letter 48

From: Elizabeth Green <green05@sbcglobal.net>
Sent: Wednesday, November 3, 2021 2:56 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: Fw: [External] Picture of electric panel and diesel pump sitting in water at the back gate in Vineyard Valley

Ms. DeRosa,

This is at the back of Vineyard Valley, where the emergency exit exists that we used for our fire drill this summer. There is a gate at the end of Del Rio and we exited thru that gate and up onto the access road during the drill (fire and police were present). The electric panel and diesel pump are right there by the gate. This is a picture taken after the heavy rains we just had. Imagine an entire season with heavy rains. Very concerning. 48-1

Elizabeth Green
Resident, Vineyard Valley

Subject: Re: Picture of electric panel and diesel pump sitting in water at the back gate

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Response to Letter 48
Elizabeth Green
November 3, 2021

48-1 The comment provides a picture of the Vineyard Valley property after a rain and shows an electric panel and diesel pump and expresses concern about flooding.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please also refer to Master Response 4.

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Comment Letter 49

From: Elizabeth Green <green05@sbcglobal.net>
Sent: Friday, November 5, 2021 9:34 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Levee

Dear Ms. DeRosa,

It has been brought to my attention that the levee has not been maintained for several years. There are gopher holes and visible proof of other animals digging in the dirt which certainly must undermine the integrity of the foundation of the levee over the years and would not be a safe place for a housing project. Please provide documents or where I might access them which show the levee has been properly maintained since being built. 49-1

Thank you.

Elizabeth Green
Resident, Vineyard Valley

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Response to Letter 49
Elizabeth Green
November 5, 2021

49-1 The comment expresses concern over the condition of the levee and suggests that the project site is not a safe place for residences. The commenter requests maintenance records for the levee.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 which addresses concerns associated with the levee and flooding.

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Comment Letter 50

November 1, 2021

Dear Ms. DeRosa,

My husband and I are writing to oppose the Hunter Project. We live in Vineyard Valley. We are very concerned about this project being built literally in our back yard. The obvious concerns are WATER: where is it going to come from to accommodate 81 new dwellings and the amount of people living in them. We don't have enough right now with 3 years of draught. 50-1 50-2

Our next concern is emergency evacuations. With only two ways out of Saint Helena, the additional residents occupying these dwellings will create a mass exodus (along with all the residents of Calistoga) during an emergency evacuation. More than likely, the Trail will be closed in various areas in the event of another fire or flooding, which has been the case with the recent fires and the recent heavy rains, so really, that leaves *one way out* for everyone. Two lanes, possibly at night with no power? A very dangerous scenario. 50-3

Then there is the endless stream of construction trucks, i.e., dump trucks carrying dirt, lumber trucks, tractors, etc., going up and down 29 and our Main Street, 5 days a week, 8 hrs. a day, for a projected time of at least **6 years!!!** Imagine the traffic that it would create to the already stressed Hwy 29 and our small town of Saint Helena. We are experiencing this right now with part of the Trail closed. The traffic on Pope St. from Starr would create horrendous congestion especially going over the Pope Bridge. 50-4

Parking would be another nightmare with all the additional cars this project would create. It is already a problem, especially during tourist season. 50-5

Vineyard Valley would be directly impacted if they were to try to use our sewer system which runs down the middle of our park on Paseo. This was discussed at the meetings at the fire house three years ago. Our sewer system would not be able to handle the additional waste and water, and it was discussed that it would have to be replaced, meaning we would have major construction going on in the middle of our park as a result of that. 50-6

The residents on Del Campo and Del Rio who bought their homes for the tranquility and view on the other side of the wall from their homes at the back of our park, would be obliterated. This small section of nature and beauty back there which so many of the residents in SH enjoy on a daily basis would be gone. 50-7

Of another major concern: I worked with Chief Hartley all this year on fire preparedness for VV, and one of the things we initiated was the use of the back gate on Del Rio which goes up on the access road for a second emergency evacuation exit. We had our first fire drill using that road this summer. What would happen to our second emergency exit? Would residents of the 81 new dwellings be using that road too? We would never make it out of here if that were the case. 50-8

We hope you and whomever else is responsible for these decisions will very seriously consider these extremely important issues that will affect all of us who live in Saint Helena for years to come if this project is allowed to go forward. 50-9

Sincerely,

Elizabeth & Rodney Green
Vineyard Valley

Response to Letter 50
Elizabeth and Rodney Green
November 1, 2021

50-1 The comment states general opposition to the Proposed Project and notes that the commenters reside in close proximity to the Project, in Vineyard Valley.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

50-2 The comment expresses a general concern related to the Project's water supply; that the current supply is not adequate to serve the proposed residential development.

Please see Master Response 2 that addresses water availability to serve the Project in addition to existing City residences and businesses.

50-3 The comment expresses concern over the Project's impact on emergency evacuations, specifically in the event of fire or flooding.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, emergency evacuation was analyzed Section 3.14 of the Draft EIR and Project impacts were concluded to be less than significant. Please see Master Response 1, that provides more details specific for emergency evacuation for both Vineyard Valley residents and Project residents.

50-4 The comment raises concerns related to construction traffic; specifically, the commenter is concerned with potential impacts to Highway 29, Pope Street, and the Pope Street Bridge and also notes the temporary closure of Silverado Trail.

Potential Project impacts, as well as impacts related to the construction of the Project, along Highway 29, Pope Street, and the Pope Street Bridge are analyzed in detail within Section 3.14 Transportation of the Draft EIR and within Appendix K, Traffic Impact Study. The comment describes portions of the Silverado Trail that were temporarily closed creating additional congestion along the Pope Bridge; however, the exact location and reason for the closure is not stated. Since the closure is not expected to be permanent, no further response is required.

50-5 The comment expresses a general concern with the Project's potential impact to parking.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with

Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements.

50-6 The comment expresses a concern related to the sewer system that would serve the Project. The commenter believes that the current sewer system does not have capacity to serve the Project and that additional construction would be required to meet the needs of the Project.

The comment does not identify any specific areas where the Draft EIR analysis is Inadequate; therefore, no response is required. Please see Master Response 4 that addresses capacity concerns with the existing wastewater system and Chapter 3, Changes to the Draft EIR for revised language regarding the results of a sewer capacity study.

50-7 The comment expresses a concern that certain City residents would have views that would be negatively impacted by the proposed development.

The Draft EIR analyzes potential changes in views associated with development of the Project under Impact 3.1-2. The Proposed Project is within the City's Urban Limit Line and would be consistent with the type and character of residential development adjacent to the site. The design of the subdivision maintains the existing street pattern and maintains existing street views of the surrounding area, consistent with the 1993 and 2019 General Plan Policies. The Project would modify long-range views of existing vineyards located to the west and on the Project site as well as views of rolling hillsides which would be partially blocked by development of new residences. However, although long-range views of hillsides and views of the on-site vineyard and open space are available in the vicinity of the Project site, and these views are not unique in that views of these features are available throughout the City.

To illustrate how development of the site could look and how it could affect public views and the existing visual character, visual simulations were prepared (see DEIR pp. 3.1-29, 3.1-30, 3.1-35, 3.1-37, 3.1-39). It was determined that because the Proposed Project would not conflict with applicable regulations governing scenic quality or substantially degrade the existing visual character or quality of public views of the site and its surroundings and impacts would be less than significant.

50-8 The comment raises a concern about the Project's effect on a secondary emergency access gate for Vineyard Valley residents.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Please also see Master Response 1, that provides more details specific for emergency evacuation for both Vineyard Valley residents and Project residents.

50-9 The comment requests the City “very seriously consider” the issues raised in this comment letter.

The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. The comment is noted and forwarded to the decision makers for their consideration.

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Comment Letter 51

City of St Helena, City Hall
Received
NOV 08

November 3, 2021

1480 Main St.
St Helena, CA 94574

Dear Ms. DeRosa,

My husband and I live in Vineyard Valley. A major concern is that the access road along the levee that Vineyard Valley used for the first time ever fire drill this summer, would be used for all the construction trucks, i.e., lumber trucks, dump trucks, bull dozers, etc., and to bring in materials; coming up 29, going thru Main St., and turning right on Adams and then to that access road. Has anyone given any thought as to where all these construction related trucks and vehicles are going to park for **6 years**??? It would seem logical that at the very least, the access road would become part of the construction zone and would not be available for an emergency exit if we had another dire circumstance such as the Glass fire over the next ***six*** years that the project is proposed to take. With that thought in mind, if the project goes forward, what happens if VV needs to use that road in the event of an emergency? 51-1

If Adams St. is extended to create a way to the Silverado Trail, then picturing that, it only seems logical that the access road would become part of that route. Then the question becomes, can VV still exit the gate at the end of our park like we did for the fire drill up onto the access road, and would we become part of the mass exodus of all the new residents from 81 new dwellings trying to get out in an emergency? It would be a disaster, as we have over 200 homes here. 51-2

Also, if that access road becomes part of the construction zone, it could be greatly compromised from all the wear and tear, and the city would need to repair it before it might be used in another emergency. We discovered a large pothole during the fire drill which Chief Hartley had repaired after the drill. 51-3

Along with this concern are emergency resources in the event of another major fire or possible flood. I know for a fact that there are only two patrol cars on duty at any given time. It seems like an additional 80+ dwellings and all the people that would be living there would greatly tax our emergency services, and I'm sure you're aware that our fire department is severely taxed right now. 51-4

Another concern: Has the levee been maintained since the flood project? We have heard that it has not and we are working to find out the answer to that. 51-5

Another concern: Who's responsibility is it financially if there is loss of property or life if there is another flood on the proposed project, Saint Helena or Hunter? This is not at all clear. 51-6

This project is a very bad idea to the detriment of all of Saint Helena, and we have only named a few of the issues it will impact. We sincerely hope the issues that all of the residents have brought up are very carefully weighed as so much is at stake. 51-7

Thank you.

Rodney & Elizabeth Green
Vineyard Valley

Response to Letter 51
Rodney and Elizabeth Green
November 3, 2021

51-1 The comment raises concerns related to the access road along the levee and the Project's impact on emergency access for Vineyard Valley residents. Specifically, the comment is concerned with access and construction zone for construction trucks and vehicles and how construction might impact emergency evacuation.

Construction activities are not permitted to block access to the levee maintenance road and in the event of an emergency access to the levee would be available. All construction vehicles and equipment would access the site from either Starr Avenue or Adams Street. No truck access would be permitted on the levee maintenance road. Please see Master Response 1 that addresses emergency evacuation concerns for Vineyard Valley residents.

51-2 The comment expresses a concern related to the possible extension of Adams Street to access the Silverado Trail. The comment questions whether Vineyard Valley residents, along with new residents from the Project, could use the access road for emergency evacuation under this scenario.

The Project does not include the future expansion of Adams Street connecting to Silverado Trail. This is a separate City project and is not required for the Project.

51-3 The comment states a concern related to the maintenance and condition of emergency access roads. The commenter is concerned that construction would negatively impact the condition of emergency access roads.

The City is responsible for maintaining roads within the City's jurisdiction. Please see Response to Comment 51-1 regarding the levee maintenance road and also Master Response 1 that addresses emergency evacuation concerns.

51-4 The comment expresses a concern related to the Project's impact on emergency response services and the ability of the Fire Department to serve the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, the Draft EIR evaluates the ability of the City's police and fire departments to accommodate the increase in demand for service in Section 3.12, Public Services and Recreation. As noted on page 3.12-1, the closest police and fire station to the Project site is located 0.2 miles to the southwest. Development of the site was assumed in the City's 1993 General Plan as well as the recently adopted 2019 General Plan. The addition of new residences would not adversely affect the ability of the City's police and fire personnel to serve the site. The City's police and fire departments have adequate staff to accommodate the increase in demand for

services and do not anticipate a decline in response times to the site. Please see Master Response 1.

51-5 The comment questions whether the Napa River levee has been maintained since it was constructed.

Please see Master Response 3 that addresses concerns associated with the levee maintenance and flooding.

51-6 The comment asks who would be held liable for damage and injury in the event of a flood.

Please see Master Response 3 that addresses issues related to the levee and flooding. Determination of legal liability for a potential future event is outside the scope of CEQA. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required.

51-7 The comment expresses general opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

Comment Letter 52

From: Gale Greisen <gale@ggreisen.com>
Sent: Tuesday, November 2, 2021 3:51 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Subject: [External] Hunter Project Questions

Questions for Planning Commission Meeting 11-2-2021 re: Hunter Project

#1 Will the sewer plant upgrade of 16.2 million as per our agreement be completed before construction would begin and will it effect the $57,000 fine. 52-1

#2 The existing sewers were constructed many years ago with the size predicated on the houses they served at that time. Will the existing system be reengineered to handle the increased load 52-2

#3 The Water Audit suit calls for the decommissioning of existing wells that are not in use will this have any effect on the project. Will a new permit be required for the now out of use well. 52-3

#4 The Water Audit suit also cites meeting sustainability goals from our existing wells providing domestic water will the addition of all of the residential units drawing from these what will the impact be and what effect will this have on the suit by Water Audit. 52-4

#5 Do we know if both the new well and the current one in use by the City of St Helena are serviced by the same aquifer? 52-5

#6 Given that the proposal will be to retrofit 300 plus homes with water saving devices to augment the additional users, would it be more prudent to have this done and accomplished prior to the additional use of water for the development. My concern is that very few residents, certainly not 300, will embrace the idea and agree to have water saving devices installed in their homes. Many of us had this done in prior years and are not in need of such an endeavor. So the fear is that the money will sit in a slush fund and the actual use for water saving devices never take place and the development will still start using the water which we have so little. Will the 300 plus homes be just on the east side as the well is our main supplier of water. 52-6

Gale Greisen
1181 Starr Ave
St Helena
415 729 6039

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Response to Letter 52
Gale Greisen
November 2, 2021

52-1 The comment asks whether the sewer plant upgrade of 16.2 million would be completed before Project construction, and whether it would affect the $57,000 fine.

The comment references a separate sewer plant upgrade project and does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The new wastewater treatment plant will have the same dry-weather treatment capacity at the existing plant. The comment is noted and forwarded to the decision makers for their consideration.

52-2 The comment states that the City's sewer infrastructure was constructed based on housing to be served at that time. The comment asks whether the existing sewer system would be re-engineered to handle the increased load from the Project.

Please see Master Response 4 that provides more details regarding the Project's wastewater infrastructure and the ability of the City to convey and treat the Project's wastewater. See also revisions to the text of the Draft EIR in Chapter 3, Changes to the Draft EIR.

52-3 The comment asks whether the Water Audit lawsuit, which calls for the decommissioning of existing water wells not in use would have any effect on the Project. The comment asks whether a new permit would be required for the out-of-use well.

The comment is speculating what the outcome of the Water Audit litigation could be on the City and the Project. Please see Master Response 2 that addresses concerns regarding water including the ongoing Water Audit lawsuit. The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

52-4 The comment asks what effect the increase of residential units by the Project would have on the Water Audit lawsuit, which cites sustainability goals for existing wells providing domestic water.

Please see Master Response 2 that addresses concerns regarding water including the ongoing Water Audit lawsuit. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

52-5 The comment asks whether the "new well and the current one in use by the City of St. Helena" are serviced by the same aquifer.

It is not clear what the “new well” is that is referred to in this comment. As discussed in the Draft EIR, the Project is not proposing to drill a new well to serve the water needs of new residential units. The Project is proposing to use an existing onsite agricultural well to irrigate the Project’s public and private landscaping. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

52-6 The comment asks whether it would be more appropriate to retrofit homes with water-saving devices prior to adding the Project’s increase in demand. The commenter is concerned that few residents would agree to have water-saving devices installed in their homes and that the Project would be constructed and occupied prior to offsetting the Project’s increase in demand. The comment asks whether the homes to be retrofitted with water-saving devices would only be on the east side of the City.

The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. Please see Master Response 2 that addresses water supply concerns.

Comment Letter 53

From: Henry Gundling <henry.gundling@gmail.com>
Sent: Tuesday, October 12, 2021 10:11 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>
Subject: [External] Hunter Project DEIR Water Comment

Re: Hunter Project DEIR

October 12, 2021

Water

The Hunter Project DEIR's claim that the Hunter Project is "water neutral" is downright laughable. The report doesn't even calculate the acre feet of water that will be taken from the city's aquifer directly upstream from its own municipal wells. Unless the developer is proposing zero landscaping, how could there be no impact on Saint Helena's groundwater, one of the city's three critical water sources?! As for indoor water usage, the proposed $596,808 for water efficiency improvements in 333 existing homes to offset the daily 17,752 gallons from city water (also coming in part from the aquifer) is nice in theory, but the city should insist that this investment, and its proven results, be implemented before development. Saint Helena's current residents will be harmed if the promised benefits fail to materialize, and they should be understandably suspicious of developers' proposed offsets. Remember the roughly $800,000 "offset" provided by the developer of the Las Alcobas hotel to mitigate the loss of 20 on site low income housing units? Really? Where are the twenty replacement low income housing units purchased by that $800,000?

53-1
53-2
53-3
53-4

The DEIR is wholly inadequate in defining the Hunter Project's potential impact on Saint Helena's water supply, both for residents, as well as wildlife. The city should insist on the DEIR fully disclosing groundwater impacts, and as well, insist on bona fide, rigorously verifiable conservation benefits as a prerequisite to development.

53-5

Saint Helena resident's are already under Phase II water restrictions due to drought and water supply shortage, and will face the likely prospect of draconian Phase III water restrictions with one more below normal rainy season. It would be irresponsible, reckless and potentially harmful for existing citizens for the city to approve a large, new development, with its huge additional water demand, without securing a truly neutral water supply .

53-6

Yours truly,

Henry Gundling
1185 MEADOWCREEK CIRCLE
Saint Helena, CA

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Response to Letter 53
Henry Gundling
October 12, 2021

53-1 The comment finds fault with the claim that the Project would be "water neutral" and that the Draft EIR does not calculate the amount of water supplied from the City's aquifer upstream of the municipal wells.

The Proposed Project is required to be in compliance with the City's Water Neutral Policy. Appendix J of the Draft EIR provides the required Water Neutral Report for the Project as the first step in compliance. The Draft EIR provides an analysis of the sources of water to supply the Project's water demand beginning on page 3.9-40 and also on pages 3.13-35 and 3.13-36. See also Master Response 2 for further details on the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

53-2 The commenter claims any water used for landscaping would have an impact on the City's groundwater supplies.

The Draft EIR analyzes the potential impact of the Project's water demand sourced from groundwater on pages 3.9-40 through 3.9-43 and also on pages 3.13-35 and 3.13-36. The Draft EIR concludes that the Project's demand on groundwater supplies is relatively small and, in part, would be addressed via adherence to the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code. See also Master Response 2.

53-3 The comment questions the ability of the Project to be able to meet the Water Neutral Policy requirements to offset the proposed water supply demand for the indoor water usage.

The Proposed Project is required to adhere to the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the City's Municipal Code. See further discussion of the City's Water Neutral Policy and Municipal Code requirements in Master Response 2.

53-4 The commenter cites an example project (Las Alcobas Hotel) as one where funds from the developer may not have resulted in the intended outcome.

The comment is referring to a different project and does not identify any specific areas where the Draft EIR analysis is inadequate. See also Master Response 2.

53-5 The comment states that the Draft EIR is inadequate because it does not disclose groundwater impacts for residents and wildlife and that the City should insist on verifiable conservation benefits.

The Draft EIR analyzes the potential impact of the Project's water demand sourced from groundwater on pages 3.9-40 through 3.9-43 and also on pages 3.13-35 and 3.13-36. The potential impacts to wildlife are analyzed in Section 3.4 Biological Resources. The reference to conservation benefits likely refers to the efficacy of the Water Neutral Policy and Municipal Code which is beyond the scope of CEQA in relation to the Proposed Project. See Master Response 2 for additional information specific to water supply.

53-6 The comment expresses a concern related to the City's current and future water restrictions and states the Project should not be approved due to its impact on water supply.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Please see Master Response 2 that addresses water availability to serve the Project in addition to existing City residences and businesses.

Comment Letter 54

From: Henry Gundling <henry.gundling@gmail.com>
Sent: Tuesday, October 12, 2021 10:11 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>
Subject: [External] Hunter Project DEIR Water Comment
Re: Hunter Project DEIR

October 12, 2021

Water

The Hunter Project DEIR's claim that the Hunter Project is "water neutral" is downright laughable. The report doesn't even calculate the acre feet of water that will be taken from the city's aquifer directly upstream from its own municipal wells. Unless the developer is proposing zero landscaping, how could there be no impact on Saint Helena's groundwater, one of the city's three critical water sources?! As for indoor water usage, the proposed $596,808 for water efficiency improvements in 333 existing homes to offset the daily 17,752 gallons from city water (also coming in part from the aquifer) is nice in theory, but the city should insist that this investment, and its proven results, be implemented before development. Saint Helena's current residents will be harmed if the promised benefits fail to materialize, and they should be understandably suspicious of developers' proposed offsets. Remember the roughly $800,000 "offset" provided by the developer of the Las Alcobas hotel to mitigate the loss of 20 on site low income housing units? Really? Where are the twenty replacement low income housing units purchased by that $800,000? 54-1

The DEIR is wholly inadequate in defining the Hunter Project's potential impact on Saint Helena's water supply, both for residents, as well as wildlife. The city should insist on the DEIR fully disclosing groundwater impacts, and as well, insist on bona fide, rigorously verifiable conservation benefits as a prerequisite to development. 54-2

Saint Helena resident's are already under Phase II water restrictions due to drought and water supply shortage, and will face the likely prospect of draconian Phase III water restrictions with one more below normal rainy season. It would be irresponsible, reckless and potentially harmful for existing citizens for the city to approve a large, new development, with its huge additional water demand, without securing a truly neutral water supply . 54-3

Yours truly,
Henry Gundling
1185 MEADOWCREEK CIRCLE
Saint Helena, CA

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Response to Letter 54
Henry Gundling
October 12, 2021

54-1 The commenter does not believe the project would be “water neutral” and the Draft EIR does not calculate the amount of water that supplied from the City’s aquifer upstream of the municipal wells. The commenter claims any water used for landscaping would have to have an impact on the City’s groundwater supplies. The comment further questions the ability of the Project to meet the Water Neutral Policy requirements and cites an example project (Las Alcobas Hotel) as one where funds from the developer may not have resulted in the intended outcome.

See Response to Comment 53-4 and Master Response 2 for further details on the City’s Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

54-2 The comment claims that the Draft EIR is inadequate because the Draft EIR does not disclose groundwater impacts for residents and wildlife and that the City should insist on verifiable conservation benefits.

See Response to Comment 53-5 and Responses to Comment 14-4 regarding impacts to wildlife.

54-3 The comment expresses a concern related to the City’s current and future water restrictions and states that the Project should not be approved due to its impact on water supply.

See Response to Comment 53-6.

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Comment Letter 55

From: Kathleen Guneratne <kathleen.guneratne@gmail.com>
Sent: Monday, November 29, 2021 11:21 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Cc: Liz Guneratne <GUNERATNE@gmail.com>
Subject: [External] Opposition to Hunter Subdivision

Hello:
I am a homeowner at 1370 Grove Court in St Helena, CA. I live several hundred feet from the planned Hunter Division. While I support affordable housing, I do not see this plan as an affordable housing plan. It appears to be a wolf in sheep's clothing--designed to make developers wealthy and deleteriously alter the landscape of St Helena. I am not satisfied with the environmental impact report (EIR) that has been filed and I am deeply concerned about the negative environmental impacts this huge development will have on our neighborhood. Given how precariously we sit perched on flood plains, and how limited water resources and other land resources are, I do not believe we can accommodate the additional population density contemplated by the report. We cannot support the additional traffic. I oppose this development. 55-1

55-2

I also am concerned that sufficient concern has not been given to preservation of protected wildlife and whether this would affect any sacred burial sites of the Wappo Indian tribe. Flood project dig unearths Wappo artifacts, bones | The Weekly Calistogan | napavalleyregister.com 55-3 55-4

Please feel free to contact me with any questions.
Kathleen Guneratne
1370 Grove Court
St Helena, CA 94574

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Response to Letter 55
Kathleen Guneratne
November 29, 2021

55-1 The commenter indicates her support of affordable housing but does not consider this to be an affordable housing project.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please refer to Chapter 2, Project Description of the Draft EIR, which describes the Project. See page 2-18 that addresses affordable housing. At this time the only request by the Project applicant is to subdivide the lots consistent with the General Plan and Zoning. The Project will need to fulfill the code required inclusionary housing requirements which will be specified in a future affordable housing agreement.

55-2 The comment opines that the Project will result in negative impacts to the neighborhood due to being within a flood plain, limited water resources, increase in population and traffic, and opposes the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

Please see Master Response 3 that addresses concerns associated with the levee and flooding; and Master Response 2 that addresses the adequacy of water supplies.

55-3 The comment notes concern for adequate preservation of protected wildlife.

Direct and indirect impacts to federal and state protected wildlife are addressed in Section 3.4, Biological Resources of the Draft EIR. Mitigation is included to conduct pre-construction surveys to ensure these species are not disturbed if present. The Draft EIR provides for adequate protection of protected wildlife species.

55-4 The comment asks if the Project would affect any sacred burial sites of the Wappo Indian Tribe and references an article in a local newspaper.

Pursuant to AB 52, the City sent letters to all tribes requesting notification and received responses from the Federated Indians of Graton Rancheria and the Yocha Dehe Wintun Nation. No response was received from the Wappo Indian Tribe. Neither the Federated Indians of Graton Rancheria nor the Yocha Dehe Wintun Nation tribe requested formal consultation with the City. The analysis of potential impacts to cultural resources is included in Section 3.5, Cultural and Tribal Cultural Resources.

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Comment Letter 56

From: Mariam Hansen <wartuhi@comcast.net>
Sent: Monday, October 18, 2021 9:38 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter EIR

Hello Maya,
Here are my comments on the Hunter Project EIR:

The project has to be water neutral, though using 18,000 gallons per day. One of the mitigations is installing water meters at each home in Vineyard Valley—247 of them. There used to be water meters—there is a remnant of one in my driveway. The city deemed it too expensive to read them all, so now we have only two—one for north of the creek and one for south. The water neutrality also plans to remove 5 acres of lawn in town and retrofit toilets. 56-1

Many other projects had to retrofit toilets in town. We had to retrofit some in the 1990s when we built a commercial building on Vintage Avenue. How many toilets are left to be retrofitted? 56-2

The fire department wants an emergency exit from the dead end cul de sac at the far eastern end of the project. The main exit route in VV is private property. The owners of Vineyard Valley will certainly object to this.

This would have to connect with the main exit route for over 200 homes in Vineyard Valley. Experience has shown that in a dire emergency VV has so much trouble getting everyone out they decided to have them drive out the levee road! In future they would have to drive past the new Hunter homes! 56-3

If there is a choice between building a freeway off ramp style bridge next to the existing Pope Street Bridge over Napa River and a new bridge for Adams St, I support extending Adams Street to the Silverado Trail. If Hunter is built that would handle the increased traffic in a much better way. Besides, as a historian, I don't want to see the setting of the 1894 Pope Street Bridge denigrated by a monstrous new structure. The bridge is on the National Register of Historic Places. 56-4

Is Nov 2 the last time comments on the EIR will be accepted? If so this has been awfully hush hush. Where is the public outreach??? 56-5
Best,
Mariam Hansen

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Response to Letter 56
Mariam Hansen
October 18, 2021

56-1 The comment suggests methods to achieve water neutrality, including installing water meters, but also states that this approach did not work in Vineyard Valley.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Master Response 2 that addresses compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

56-2 The comment notes that other projects were required to retrofit toilets in the City and questions how many are still needed to be retrofitted.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Master Response 2 that addresses compliance with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

56-3 The comment suggests that Vineyard Valley residents will object to building an emergency exit from the Project's proposed cul-de-sac. The commenter has concerns related to emergency evacuation.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, emergency evacuation was analyzed Section 3.14 of the Draft EIR and Project impacts were concluded to be less than significant. Please also see Master Response 1, that provides more details specific for emergency evacuation for both Vineyard Valley residents and the Proposed Project.

56-4 The comment states opposition to a "freeway off-ramp style bridge" at the existing Pope Street bridge over the Napa River and a preference to extend Adams Street to Silverado Trail.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

56-5 The comment raises a general concern about the public comment period and outreach efforts.

The Draft EIR was released for the required 45-day public review period on September 23, 2021 through November 8, 2021. In response to numerous requests, the City extended the comment period through November 30, 2021 for a total of 67 days.

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Comment Letter 57

From: Donna Hardy <mhardysh@att.net>
Sent: Monday, November 1, 2021 10:16 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Draft EIR

Good Morning Maya,
Attached are my questions and concerns about the proposed Hunter Project that will be discussed at Tuesday's Planning Commission Meeting. Please distribute it to the members and make it a part of public record.

Thank you,
Donna Hardy
620 Harvest Lane
Saint Helena, CA 94574

After reviewing the Hunter Project Draft EIR, I find the items listed below of concern:

1) Does the City of St. Helena have enough water in drought years to permit 87 new homes to be built? Can Water Neutrality be achieved by water conservation and retrofitting old fixtures in town? Should an agricultural well be used for landscape watering to help a proposed housing development achieve Water Neutrality? 57-1
2) The 1993 General Plan, which is the document being used for this Subdivision request, stipulates that Adams St. be extended to the Silverado Trail; why is this not being required as a condition for the project? 57-2
3) The Hunter property was in the flood plain before the Measure A Levee was built. After its completion. FEMA then changed the zoning to Firm X, which no longer requires homeowners to purchase Flood Insurance. If the project is approved and homes are built behind a levee the City of Saint Helena created and is required to maintain, the city could be held responsible for the losses if the levee ever failed. Could the city be held in non-compliance of the terms of the Measure A agreement if homes were built as proposed? Did the Measure A Project change the buildability of the Hunter Land? 57-3
4) It is a requirement that the project be Water Neutral by retrofitting old toilets in town and other water savings measures to offset the interior water use of the 87 new homes. The city is presently in a Phase II water emergency, and homes have been allocated water usage based on the number of people living in them. If usage is over the limit, fines are given, and no new water hookups are allowed during this time. With these restrictions why are we currently considering a subdivision of 87 new homes and how much more can be done to save water if the dry years continue? 57-4

All exterior watering for the Project is proposed to be an on-site, inactive, groundwater well that was inoperable at the time of the site visit for the Draft EIR. The Subbasin monitoring well may be within the pumping influence zone of the Stonebridge Complex wells which supplies the entire city with up to 20% of its water demand in normal years, and up to 30% in dry years. Currently the City of Saint Helena is being sued by Water Audit, CA which is critical of its use of the Stonebridge wells for municipal use and a pattern of no discretion in issuing permits for new wells. The City Council is having a Closed Special Meeting on Nov. 1 to discuss the matter. Is the Planning Commission not concerned that approving the use of a groundwater well for outside irrigation of new homes in the city will potentially further open them to another suit from Water Audit, CA or another agency? 57-5 57-6

On page 490 of the EIR there is a chart that shows water supplies would not be sufficient to meet demands under all scenarios. It is then suggested if supply were low, amount could be increased by

1) conservation
2) modifying rates to encourage conservation
3) increasing ground water production.

With the current drought the city has tried conservation with some level of success, but did not get the results they expected. Stiff fines were implemented modifying the rates to further encourage conservation and the first month over a million dollars in fines were dolled out. Presently the City is, out of necessity, using more groundwater from the Stonebridge Wells to supply the city's needs. Given our small number of water resources it will only get worse with more housing, and using a presently inoperable well for all outdoor irrigation on the project could open us up to further suit.

57-7

In the Transportation and Circulation portion of the EIR,, 3.14, pg 522, the streets impacted by the project are defined.

Saint Helena residents know that Starr Ave. is a short route for cars traveling from the Silverado Trail to Safeway, Railroad Ave., or other parts of the city. Pope Street serves most people that come from the Silverado Trail to destinations in Saint Helena, it is the first access street off of the trail if coming from Napa, and an easier street to navigate at Main St. because there is a traffic signal. Pratt Ave. or Deer Park Road, both further North on the trail both have stop signs at Main St. or Hwy 29 and are not always as easy to cross. Early in the morning or after work the stop sign at Pope and Starr can be busy with cars waiting for a break in the Pope St. traffic to complete a left-hand turn. Starr is not a street for mainly the residential neighborhood as defined in the Draft EIR, but a cut through street to get to the center of town or out to the Silverado Trail. If the Hunter Project is put through this will only get worse.

57-8

Railroad Ave. is another cut through street that locals use to avoid driving on Main St., and does not mainly serve the industrial and commercial uses in the downtown area as defined in the EIR. There is more vehicle traffic on Railroad Ave. than industrial or commercial traffic.

57-9

Adams Street is a main downtown street with three areas where traffic can bunch up, at the Railroad Ave. intersection, a four way stop, the railroad tracks when the Wine Train is coming into the station or leaving, and at the Main St. signal. I question the defined use of some streets in the EIR, either the person writing the descriptions does not know how locals use the streets, or the descriptions were used to make the streets look less busy.

57-10

The Hunter project with the extension of Adams and Starr Ave. will increase traffic tremendously for present residents in the area, but one way to help alleviate some of this increase is to extend Adams Street to the Silverado Trail. The 1993 General Plan states "The city desires that the Adams Street extension to the Silverado Trail be completed in an expeditious manner:" and "The city will work with potential developers to acquire the needed combination of public and private financing required to implement this project."

57-11

The Hunter Project has used items in the 1993 General Plan which are agreeable to their project i.e., zoning of the land from agriculture to Medium Density Residential, and the extension of Starr Ave. to Adams St. and Adams St. to Starr. They have chosen to overlook the one thing in the General Plan that would help mitigate some of the traffic and circulation problems the development would create for existing, nearby residents. If the Hunter Project is approved the city should require that Adams St. be extended to the Silverado Trail before the first house is built for the safety of new residents and to preserve quality of life for existing neighbors. This would provide a direct route to the center of Saint

57-12

Helena, relieve traffic on the historic Pope St. Bridge and reduce traffic using Pope St. and Starr Ave. as a by-pass route.

57-12 Cont.

The Hunter Land was originally a part of the Flood Plain until the City of Saint Helena built a Levee as a part of the Measure A Flood Protection Project. After this project was completed, FEMA re-evaluated the land's danger of flooding and revised the FIRM rating to Zone X, alleviating the need to buy Flood Insurance for homes built on the land. Could the Hunter Project put the city in violation of the terms of the Measure A project by allowing homes to be built on land that was previously a part of the Flood Plain? The Measure A agreement states that money from the fund cannot be used to create projects that promote growth, increase population and allow land to be developed that was not previously so. Did the Measure A change the buildability of the Hunter Land taking it out of the flood plain? With the change of FIRM rating, it appears it did. If so the city, by allowing homes to be built without raised foundations, could be in violation of the Measure A requirements.

57-13

The Hunter Draft EIR states that chance of flooding is low and if it were to occur it would be with warning and slow. There would be little chance of loss of life as people would have time to evacuate the area or go the second stories of their homes to avoid the water. Why should homes be built in an area where there would even be such a possibility? With the danger of property loss if there were a breach in the levee, threat of the city being held responsibly, putting additional strain on the city's already minimal water supply, and all the other concerns I have raised, this sub-division should not be approved.

57-14

Respectfully submitted by,

Donna Hardy

620 Harvest Lane

Saint Helena, CA 94574

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Response to Letter 57
Donna Hardy
November 1, 2021

57-1 The comment asks whether the City has enough water in drought years to serve the Project and whether water neutrality could be achieved by water conservation and retrofitting old fixtures. The comment goes on to ask whether an agricultural well should be used for landscape watering to help the Project achieve water neutrality.

The Project is proposing to use the existing on-site well to supply water for landscaping, as explained on page 2-26 in Chapter 2, Project Description. Please see Master Response 2 that addresses water supply.

57-2 The commenter interprets the City's 1993 General Plan as requiring that Adams Street be extended to the Silverado Trail and questions why this extension is not required by the Project as a condition of approval.

The Project does not include the future expansion of Adams Street connecting to Silverado Trail. The City's Public Works Department reviewed the tentative subdivision map and determined the extension of Adams beyond the new intersection with Starr Avenue is not required. This is a separate City project and is not required for the Project. The comment is noted and forwarded to the decision makers for their consideration.

57-3 The comment states that the project site was within a flood plain before the Napa River levee was built and that after levee construction, the flood zone designation was changed. The comment states the City could be held responsible in the event of a levee failure. The comment goes on to ask whether the City would be held in non-compliance of the Measure A agreement if the Project is developed and if the levee changed the buildability of the site.

Measure A, as described on page 3.9-6 of the Draft EIR, was passed in 1998 by Napa County and provided the basis for a number of flood improvement projects. The Project site has been designated and zoned for residential development dating as far back as the City's 1975 General Plan, as stated on page 2-12 of the Draft EIR. The Project is not funded in any part with Measure A funds. The City's Flood Control Project, which did receive Measure A funds, was designed to provide flood protection for both developed areas within the City, as well as areas already planned for future development, including the Project site. For further detail, please see Master Response 3 for more information concerning the levee.

57-4 The comment asks whether the Project would be required to retrofit fixtures in the City and implement other water saving features, in compliance with the Water Neutral Policy. The comment also expresses concern given the City's current water supply and water saving requirements.

As stated in the Draft EIR on page 3.9-41, the Proposed Project is required to comply with the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code. See also Master Response 2 for more information on water supply.

57-5 The comment opines that the Project would use groundwater from an on-site well for exterior (landscaping) uses and that the well is within a subbasin that may include the pumping influence zone of the Stonebridge Complex, which supplies some City water.

The on-site well was evaluated in the referenced well capacity and sustainability assessment (Appendix L of the Draft EIR) and was determined to have sufficient capacity to meet the proposed demand. The assessment conducted a 24-hour pumping test at a rate (40 gallons per minute [gpm]) of approximately four times the proposed rate (10.6 gpm) which only produced one foot of drawdown in the pumping well. The proposed average pumping rate of 10.6 gpm is relatively small compared with existing agricultural wells (DEIR p. 3.9-43). Therefore, the Draft EIR correctly identifies that the proposed use of the well would have a less-than-significant impact on the subbasin and as a result also on the City's Stone Bridge wells.

57-6 The comment states that the City is currently under litigation by a corporation, Water Audit California, for its use of wells in the Stonebridge Complex and pattern of issuing new permits for wells. The commenter raises a concern that the Project would further raise issues given the ongoing litigation.

See Master Response 2 for details related to the litigation involving the Water Audit.

57-7 The comment opines that there is insufficient groundwater supply to meet the Project's demand and that use of the on-site well could result in further litigation.

See Master Response 2 for further details regarding the City's water supplies and ability to meet future demands. As noted in the Draft EIR on page 3.9-41, the Proposed Project would be required to adhere to the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code which requires conservation measures or fees to fund the City's conservation measures commensurate with the Project's demand. Otherwise, whether use of the existing onsite well could be the subject of litigation is outside the scope of CEQA and does raise any issue as to the adequacy of the analysis in the Draft EIR.

57-8 The comment raises concerns regarding peak hour traffic at the intersection of Pope Street and Starr Avenue and states that Starr Avenue serves more than residential users because many motorists use it as a shortcut and further claims the EIR does not represent this street correctly in terms of the types of its users.

Starr Avenue is classified as a "residential street" per the Circulation Element of the City's 2019 General Plan, which is defined predominantly as a roadway that provides

residential access and support for local trips. The Proposed Project would not alter the existing or General Plan classification of Starr Avenue or alter the way the road is used. Section 3.14 of the Draft EIR, as well as Appendix K, Traffic Impact Study, analyzes the intersection of Pope Street and Starr Avenue, both in terms of potential level of service (LOS) impacts and vehicular queuing. The analysis concludes that the impact to this intersection, with or without Project traffic, in every analysis scenario, would be less than significant and would not require improvements to the intersection. An analysis of LOS or traffic congestion and queuing is no longer required to be evaluated in an EIR as by law, an increase in LOS can no longer be considered an environmental impact under CEQA.

57-9 The comment states her personal observation that Railroad Avenue is used by motorists as a shortcut street to avoid Main Street and claims the EIR does not represent this street correctly because it does not mainly serve industrial and commercial uses.

Railroad Avenue is classified as a “downtown/mixed-use street” per the Circulation Element of the City’s 2019 General Plan, which is defined predominantly as a roadway that supports all travel modes and promotes multimodal access. The Proposed Project would not alter the existing or General Plan classification of Railroad Avenue or alter the way the road is used. Further, Section 3.14 of the Draft EIR, as well as Appendix K, Traffic Impact Study, thoroughly analyzes several intersections along Railroad Avenue (intersections with Fulton Lane, Adams Street, and Hunt Avenue), both in terms of potential LOS impacts and vehicular queuing. The analysis concludes that the impact to these intersections, with or without Project traffic, in every analysis scenario, would be less than significant and would not require improvements to the intersection. An analysis of LOS and queuing is no longer required to be evaluated in an EIR as. by law, an increase in LOS can no longer be considered an environmental impact under CEQA.

57-10 The commenter offers an observation that Adams Street is a busy downtown street and raises a concern related to the Draft EIR’s description of the users of this street and others in the area.

Adams Street is classified as a “downtown/mixed-use street” per the Circulation Element of the City’s 2019 General Plan, which is defined predominantly as a roadway that supports all travel modes and promotes multimodal access. The Proposed Project would not alter the existing or General Plan classification of Adams Street or alter the way the road is used. Further, Section 3.14 of the Draft EIR, as well as Appendix K, Traffic Impact Study, thoroughly analyzes several intersections along Adams Street (intersections with Main Street, Railroad Avenue, and Library Lane), both in terms of potential LOS impacts and vehicular queuing. The analysis concludes that the impact to these intersections, with or without Project traffic, in every analysis scenario, would be less than significant and would not require improvements to the intersection. An analysis of LOS and queuing is no longer required to be evaluated in an EIR, as. by law, an increase in LOS can no longer be considered an environmental impact under CEQA .

All roadways analyzed within Section 3.14 of the Draft EIR, as well as Appendix K, Traffic Impact Study, utilized descriptions and characterizations as described in the Circulation Element of the City's 2019 General Plan.

57-11 The comment opines an extension of Adams Street to the Silverado Trail would alleviate traffic created by the Project and provides excerpts from the 1993 General Plan that stipulates this extension.

The City acknowledges that the extension of Adams Street to Silverado Trail is included in the adopted Circulation Element of the General Plan. See Response to Comment 57-2. The comment is noted and forwarded to the decision makers for their consideration.

57-12 The comment offers an opinion that the Project should be conditioned to extend Adams Street to the Silverado Trail to reduce traffic on the Pope Street Bridge, Pope Street, and Starr Avenue. The commenter believes the Project uses objectives from the General Plan that support the Project but overlooks the Adams Street extension.

Please see Response to Comment 57-11. The comment is noted and forwarded to the decision makers for their consideration and no further response is required.

57-13 The comment states that the project site was originally within a floodplain until the City constructed the Napa River levee. The commenter questions whether the Project would result in the City violating the terms of the Measure A agreement by allowing homes to be built on land that was previously within a floodplain. The comment also asks if Measure A changed the buildability of the Project site.

Measure A, as described on page 3.9-6 of the Draft EIR, was passed in 1998 by Napa County and provided the basis for a number of flood improvement projects. The Project site has been designated and zoned for future residential development dating as far back as the City's 1975 General Plan, as stated on page 2-12 of the Draft EIR. The Project is not funded in any part with Measure A funds. The City's Flood Control Project, which did receive Measure A funds, was designed to provide flood protection for both developed areas within the City as well as areas already planned for future development, including the Project site. For further detail, please see Master Response 3 for more information on Measure A.

57-14 The commenter states an opinion that homes should not be built in areas that have a "low ... possibility" of flooding. The comment also raises a concern regarding the City's responsibilities and liabilities in the event of major flood event and states the Project should not be approved.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Master Response 3 that addresses the City's liability in the event of a major flood event.

Comment Letter 58

-----Original Message-----
From: Carla Holm <holmhouse@yahoo.com>
Sent: Wednesday, November 3, 2021 1:43 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Planning commission & city of St. Helena:

I have lived in Vinyard Valley for over 10 years and was so relieved that the 33 million dollar taxpayer money the funded the flood project was finished. No more erosion of soil under the wall,no flooding over the wall and no more high priced flood insurance for Vineyard Valley. 58-1

The 81 new homes will cause more erosion because the only place it will go is into Vinyard Valley. 58-2

Also, the flood of new waste in our sewer system on Paseo Grande. 58-3

We are also cutting are water use and the new homes will be using 18,000 gallons a day!!! Low flow toilets is less than minimal help. 58-4

Add the stress of our understaffed police and fire departments, so that Vinyard Valley and the new homes can get help before death and disaster strike!!! 58-5

So much more can be said, but isn't this enough to stop this land grab to make one person wealthy?! PLEASE, STOP HUNTER PROJECT FOR THE LIFE OF OUR COMMUNITY!! Thank You, Carla Holm 58-6

Sent from my iPhone

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Response to Letter 58
Carla Holm
November 3, 2021

58-1 The commenter shares personal history and her relief that the City completed the levee along the Napa River.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

58-2 The comment expresses a general concern that the Project will cause significant erosion.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, erosion impacts were analyzed in Section 3.9 of the Draft EIR; and impacts were determined to be less than significant because the Project would be required to comply with existing state and city permitting requirements and conditions of approval that regulate erosion.

58-3 The comment expresses a general concern regarding the City's sewer system capacity.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Section 3.13 of the Draft EIR discusses sewer system capacity in the City. Additionally, pursuant to Municipal Code Section 3.32.020, the City collects development impact fees on new development to pay for public improvements related to sewer projects. The Project applicant would be required to pay these fees, which would help fund future improvement projects. Please see Master Response 4 that addresses sewer concerns.

58-4 The comment expresses a general concern regarding the Project's water usage.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. However, Master Response 2 addresses water supply concerns.

58-5 The comment expresses a general concern that the Project would create a negative impact on police and fire protection services.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, the Draft EIR evaluates the ability of the City's police and fire departments to accommodate the increase in demand for service in Section 3.12, Public Services and Recreation. Development of the site was assumed in the City's 1993 General Plan as well as the recently adopted 2019 General Plan. As discussed

in the Draft EIR, the City's police and fire departments have adequate personnel to serve the Project and expansion of existing stations would not be required.

58-6 The comment states opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

Comment Letter 59

From: Suzanne Day James <sdayjames@earthlink.net>
Sent: Sunday, November 21, 2021 7:11 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Objections to Hunter Project

November 22, 2021

Dear Ms. Derosa,

I am writing to express my serious concern related to the proposed 87-Unit Hunter project between Vineyard Valley and the levee which poses numerous significant problems. 59-1

Others have spoken and written on the impact traffic issues will have on our small city's limited roadways. Main Street is already congested and a bottleneck during a major portion of the day. How will it handle the additional cars and trucks from 87 new units? It makes me shudder to think about the congestion, to say nothing of the additional pollution, noise, and safety issues for pedestrians. 59-2 59-3

The same is true for substantial water issues. We are currently under a Phase 2 water shortage emergency program which limits non landscaping use to 65 gallons per resident daily. The Draft EIR dramatically underestimates water usage of the 87 new units. Further, the proposal is to use the Vineyard Valley sewer system which is already compromised and inadequate, would likely result in even more backups of rainwater and waste products than has already occurred from a city manhole located on Paseo during heavy rains. Vineyard Valley has more than enough responsibility providing water and sewer for its own residents. Adding 87 more units is untenable and dangerous. 59-4 59-5

However, my main concern is the lack of any emergency evacuation plan for our approximately 350 residents, a major omission for a retirement community such as ours. A couple of years ago I did a survey of our Park on safety issues, and discovered more than twenty percent of residents used assistive devices for mobility, e.g., walkers, electric carts, wheelchairs, crutches, canes. These people would need extra assistance in case of an emergency evacuation as well as two safe and dependable exits, one on each end of the Park. Will there be access to the levee as there is now that we can use to get to town? Are there evacuation plans for the proposed project that will not interfere with Vineyard Valley 59-6

resident's exodus? There is no way of knowing as this critical issue is not addressed in the EIR. 59-6 Cont.

Finally, I am horrified at the idea of six years to complete this project! Six years of construction noise, diesel trucks, dust, pollution, traffic congestion, etc., in the center of town will significantly reduce our quality of life and likely reduce property values. 59-7

Little financial gain to the city as the expenses for providing infrastructure and first responders will likely equal or exceed any income. Major issues with transportation, water and sewer. Omission of emergency evacuation considerations and plans. 59-8

I fail to see any positive value in the proposed project for our city and its quality of life. Therefore, I strongly urge the Planning Commission and Council, if it gets that far, to say NO and refuse to support any further consideration of the Hunter Project. 59-9

Sincerely,

Suzanne James

Resident of Vineyard Valley

Response to Letter 59
Suzanne James
November 22, 2021

59-1 The comment states opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

59-2 The comment expresses a general concern over the Project's impact to traffic congestion.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. Please also see Response to Comments 10-2 and 36-2 for additional information.

59-3 The comment expresses general concerns over pollution, noise, and safety for pedestrians.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Therefore, a general overview of impacts addressed in the Draft EIR specific to air quality, noise, and pedestrian traffic safety is provided. The Draft EIR addresses direct and indirect impacts associated with construction and operation of the Project. Section 3.3, Air Quality, identifies sensitive receptors and notes close proximity to residences. The Bay Area Air Quality Management District (BAAQMD) establishes thresholds for the evaluation of potential impacts, which are established to be protective of human health. The EIR concluded that construction and operation of the Proposed Project would not result in emissions that exceed the BAAQMD emission thresholds for any criteria air pollutants, including reactive organic gases (ROG), nitrogen dioxide and nitric oxide (NO_x), particulate matter (PM_{10}, or $PM_{2.5}$). ROG emissions would be associated with motor vehicles, construction equipment, and architectural coatings (paint). The analysis also addresses if the Project would expose sensitive receptors to substantial pollutant concentrations. The BAAQMD has adopted project and cumulative thresholds for three risk-related air quality indicators to sensitive receptors: cancer risks, noncancer health effects, and increases in ambient air concentrations of $PM_{2.5}$. This includes exposure to $PM_{2.5}$ and other toxic air contaminants (TAC) which would occur during construction activities. The primary TAC is diesel particulate matter (DPM) which is emitted from emissions associated with construction equipment operations and heavy-duty trucks during construction activities, and the associated health impacts to sensitive receptors. Based on the modeling conducted for the Project construction activities would not exceed the BAAQMD thresholds resulting in exposure of sensitive receptors in the vicinity of the Project site to substantial TAC concentrations (see DEIR Tables 3.3-8 and 3.3-9, p. 3.3-33).

Please see Response to Comment 38-1 for more information on noise impacts.

Pedestrian safety along with transportation impacts are analyzed in Section 3.14 of the Draft EIR. This section analyzes Project impacts related to consistency with plans or policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. As noted on page 3.14-40, the Project includes the extension of Adams Street and Starr Avenue to provide vehicle, bicycle and pedestrian access to the site, consistent with the 1993 General Plan Policy 5.8.1 and Policy CR1.1 from the City's 2019 General Plan. Sidewalks would be provided along both sides of the street allowing safe pedestrian access to the site from adjacent areas. Sidewalks are also available connecting the Project site to downtown St. Helena, including neighborhood services along Main Street, retail and grocery stores, and the City's Public Library. The Proposed Project would provide adequate sidewalks and would not conflict with any plans or policies supporting either the development of these facilities or the use of these facilities; therefore, impacts are less than significant.

59-4 The comment expresses concern over the Project's impact to the City's water supply and their belief that the Draft EIR underestimates the Project's water demand.

Please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code. As stated on page 3.13-24 of the Draft EIR, a Water Neutral Report was prepared for the Project that assumes a higher and more conservative persons per household (PPH) rate as compared to the City's PPH to determine population to calculate water demand.

59-5 The comment states the Project would tie into the City's existing stormwater infrastructure and sewer lines that also serve Vineyard Valley Mobile Home Park and opines that adequate capacity is not available in the existing stormwater and sewer infrastructure to serve the Project.

The ability of the City's existing stormwater and wastewater infrastructure to serve the Project is addressed in the Draft EIR in Section 3.13, Utilities and Service Systems. As indicated in this section, the City's detention basin was designed to accommodate stormwater runoff assuming 70% of the Project site would be developed with impervious surfaces (i.e., roads, sidewalks, homes), which is more than the amount of impervious surface area to be developed under the Project.

Pursuant to Municipal Code Section 3.32.020, the City collects development impact fees on new development to pay for public improvements related to stormwater drainage projects. The Proposed Project applicant would pay these fees, which would help offset any increased demands on the City's stormwater drainage system. Therefore, the Proposed Project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities and the impact would be less than significant.

Wastewater flows from the western portion of the Project site are proposed to drain into an existing public manhole at the corner of Starr Avenue and Hunt Avenue via new 8-inch sewer pipes. The area east of Starr Avenue, lower in elevation, is proposed to drain east through the Project site via new 8-inch sewer pipes within a public easement and into an existing public manhole in the Vineyard Valley Mobile Home Park. All new sewer mains and lines are sized to accommodate Project flows, per City standards. Please see also Master Response 4 that provides more details regarding the Project's wastewater infrastructure and the ability of the City to convey and treat the Project's wastewater.

59-6 The comment raises a concern related to emergency evacuation for Vineyard Valley residents.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Emergency evacuation was analyzed Section 3.14 of the Draft EIR and Project impacts were concluded to be less than significant. Please also see Master Response 1, that provides more details related to emergency evacuation for both Vineyard Valley residents and the Proposed Project

59-7 The commenter is concerned about the construction timeline and devaluation of properties.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The commenter's concern related to property devaluation is not required to be evaluated in an EIR.

59-8 The comment raises general concerns related to the cost of the Project for the City and re-iterates issues raised in Comments 59-2 through 59-7.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not introduce new issues related the accuracy or adequacy of the Draft EIR; therefore, no response is required. Please see Responses to Comments 59-2 through 59-7.

59-9 The commenter is opposed to the Project and urges the City to reject the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

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Comment Letter 60

From: fj <frank.jonelis@gmail.com>
Sent: Monday, November 1, 2021 9:46 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>
Subject: [External] Opposing Hunter Subdivision Project

To Saint Helena Planning Dept
Attn M De Rosa
Reference: The Hunter Project, Saint Helena CA

Hello Maya

The Hunter Project does not pass the common sense smell test, regardless of what Hunter's fancy consultants and lawyers tell you. It is a massive, dense project, inappropriate for the small city of Saint Helena. 60-1

It will use a lot of water, more than we have, regardless of what the developer claims. Just look at how many units there are. Whatever amount of water Hunter claims they will use, anyone with eyes and a brain can see it will use more water than that. 60-2

It will generate an unacceptable amount of traffic, and an unacceptable number of cars parking all over the surrounding streets. All of those extra cars will generate pollution, noise, and congestion. What was formerly a quiet, healthy, peaceful open space will be crammed with a ridiculous number of cars and structures. 60-3

Water that used to soak into the soil will be blocked by roofs, sidewalks, and streets. 60-4

Despite having built a personal levee around his personal property at taxpayer expense, the entire development is on a flood plain. The recent rains raised the water level from nothing to 16 feet in a few hours, even considering that the ground was so dry that it soaked up much of the water before it could even get to the river. 16 feet is only 2 feet below the flood stage of 18 feet. The recent storm was not nearly as severe as many historical storms. And past history is no longer representative of what is happening with climate change, worsening droughts, and more extreme weather. 60-5

There is not enough consistent water supply to serve Saint Helena as it is now, even without adding this massive development which will use more water than the developer claims it will. 60-6

There is no way to guarantee that future, extreme weather events will be contained by Hunter's personal levee that taxpayers paid for. Saint Helena, not Hunter, will be liable for the damage. Hunter and his money will be long gone. 60-7

The size of the project, its water use, its traffic, its noise and its flood risk simply do not pass the smell test. It stinks, and everybody knows it. 60-8

The project should not be built.

We urge the committee to reject the Hunter Project. 60-9

Frank and Tracy Jonelis
708 Hunt Ave, Saint Helena

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Response to Letter 60
Frank and Tracy Jonelis
November 1, 2021

60-1 The comment states opposition to the Project due to its proposed size and density.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

60-2 The comment raises concerns regarding the Project's increase in water demand and believes that the Draft EIR underestimates the Project's water usage.

Please see Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

60-3 The comment raises general concerns related to the Project's generation of traffic, stating that Project traffic will generate pollution, noise, and congestion.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Please also see Response to Comment 59-3 for information on pollution and noise impacts.

60-4 The comment states a general concern regarding the Project's increase in impervious surfaces.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, as stated in the Draft EIR on pages 3.9-44 and 3.9-45, the additional stormwater runoff created by the Proposed Project would be directed to the City-owned off-site detention basin, adjacent to the Project site, which has been designed to store the increase in storm water runoff from the Project site during a 100-year storm event. The detention basin was designed assuming that the Project site would be developed with 70% impervious surfaces; however, the Project would develop less of the site (58%) with impervious surfaces. Therefore, the stormwater runoff from the proposed Project would be adequately served by the off-site detention basin.

60-5 The comment states that the Project is proposed on a flood plain and could be subject to historical storms, which could be even more severe due to climate change.

Flooding and flood hazards as a result of storms are addressed in the Draft EIR starting on page 3.9-5 of Section 3.9, Hydrology and Water Quality. As shown in Figure 3.9-2, the Project site is not within a Special Flood Hazard Areas but is mapped as being in an area with reduced flood risk due to a levee (FEMA 2012). By being within an area of reduced risk due to levee, the Project site is considered

mapped within the 500-year flood zone (FEMA 2012). Based on the levee design, the Project site would be subject to a flood exceeding a 200-year recurrence interval, equivalent to less than a 0.5% annual chance. FEMA has established the Project site is not subject to any floodplain development restrictions such as the requirement to purchase flood insurance (FEMA 2012). The likelihood of a serious flood affecting the Project site (as well as those areas also protected by the levee/flood wall) is very low. In addition, the levee provides greater than the often standard 100-year flood with a 200-year flood design to account for other factors such as climate change. Please see Master Response 3.

60-6 The comment opines that the City does not have consistent water supply to serve its residents and that the Project would use more water than what is assessed in the Draft EIR.

Please see Response to Comment 60-2 and Master Response 2 that addresses the City's ability to supply water and the requirements of the Water Neutral Policy.

60-7 The comment opines that there is no way to guarantee future extreme weather events would be contained by the Napa River levee and that the City would be liable for any damage.

Please see Response to Comment 60-5 and Master Response 3 that addresses City liability in a flood event.

60-8 The comment raises general concerns related to the Project's impact on water supply, traffic, noise, and flood risk.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Responses 2 and 3 regarding water supply and levee concerns and Response to Comment 38-1.

60-9 The commenter states their opposition to the Project and urges the City to reject the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

Comment Letter 61

October 27, 2021

To members of the St. Helena City Council
and members of the St. Helena Planning Commission,

I have lived on Meadowcreek Circle in St. Helena since 2003.

Many of my concerns regarding the proposed Hunter project echo those previously voiced, as listed on page ES-3 of the Draft Environmental Impact Report for the Hunter Subdivision Project (DEIR): "Concerns raised from public agencies and the public include impacts to the property from potential flooding, traffic and circulation impacts, increased water demand, and impacts to cultural resources." I have chosen to focus my comments on specific threats to the health and safety of current and future St. Helena residents, should the Hunter project be built. 61-1

Environmental/Air Quality Issues

According to page 3.0-3 of the DEIR, "The Proposed Project application does not include a formal phasing plan. Therefore, for the purposes of this EIR buildout of the Project would occur based on market conditions and the timeliness of obtaining building permits. Therefore, it is assumed that the Project could take anywhere from 6 years or longer for full buildout, based on market and growth management factors."

Page 3.3-23 of the DEIR: "For the analysis, it was generally assumed that heavy construction equipment would be operating for approximately 8 hours per day, 5 days per week (22 days per month) during Proposed Project construction." As a local resident, I will verify there are currently existing conditions of substantial dust and noise from agricultural and grass control activities affecting residences in the vicinity of the proposed Hunter project, and the proposed 6 years of construction will certainly exacerbate those existing air quality issues. 61-2

Page 3.3-26 of the DEIR: "Notably, in the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015, the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might impact a project's occupants, except where the project would significantly ***exacerbate*** an existing environmental condition.

On page 3.3-26 the DEIR verifies that the probable worsening of existing air quality issues in the vicinity of the proposed Hunter project would rise to the level of a significant impact under California Environmental Quality Act (CEQA) Guidelines: "Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people." 61-3

I question which entity, the City of St.Helena or the Hunter project developers, will be legally and financially responsible for any loss of health, life or property by adjacent property residents resulting from environmental and air quality degradation caused by a protracted 6 year Hunter construction project? 61-4

Water Quality and Availability

According to the St. Helena City government, we are in a serious water emergency. Expensive upgrades will be necessary to provide adequate water service to existing customers of the St. Helena City water enterprise moving forward. In addition, past City of St. Helena leadership has made binding water supply decisions which have worsened our current water shortage. During the summer of 2021, many City water customers incurred unaffordable fines for excessive water use as a consequence of St. Helena water rationing regulations. I'm sure any future residents of the Hunter Subdivision would not enjoy sharing in this experience! 61-5

There are also ongoing issues with the quality of St. Helena City water and malfunctions at the City sewage treatment plant, as documented by City correspondence and local news media. Here is a recent example: below is a photo of water from the kitchen faucet of my St. Helena residence this week, from 10/25/21 to 10/26/21. I was assured by staff at St. Helena Public Works on the morning of 10/25/21 that this water was safe to drink, but to my knowledge, no water testing had been undertaken by the City, in spite of admission by City staff that a water main had been ruptured and infiltrated with pollutants. I was told that the Vice Mayor and the City Manager were aware of the situation. The City's difficulties in ensuring a quality water supply must be overwhelming, judging by the lack of timely communication on this issue. Finally, on the afternoon of 10/25/21, there was a single press release from the City mentioning a ruptured water main, but no mention of the visibly poor water quality, or any apparent attempt to determine if the water was fit for consumption. In addition, I can attest that my students at Robert Louis Stevenson Middle School were drinking this questionable water with no warning or word of caution from St. Helena City leadership to the school district. 61-6

In reference to the St. Helena 2010 Water Supply Plan, the DEIR (page 3.13-10) clearly states "...water supplies under both the Likely Buildout Scenario and the Full Buildout Scenario would not be sufficient to meet demands during all [water supply] scenarios."

Given these circumstances, how can the City or the developer warrant to any future Hunter Project residents that there will be a sufficient supply of good quality water to supply their residences? What if the water supply and quality continues to be inadequate? The current lack of an adequate supply of quality water in the City of St. Helena indicates that the addition of any further housing units must wait until the water delivery infrastructure is upgraded. Which entity, the City or the Hunter project developers, will be legally and financially responsible for any future injury to health, life or property resulting from the worsening of City of St. Helena water supply/quality issues, exacerbated by addition of 80+ households in the proposed Hunter project?

61-7

61-8

There are mitigating actions listed in the DEIR, such as page ES-3 "Minimize City water use by continuing the use of an existing on-site water well for irrigation of Proposed Project landscaped areas" and page 3.13-28 "The Proposed Project would be designed not to exceed 0.4 acre-feet/year/dwelling unit of water based on the installation of increasingly efficient and lower- water-using fixtures and appliances and irrigation systems." However well intentioned, these mitigating actions don't come close to solving the difficult issues facing the City of St.Helena's water enterprise.

61-9

Danger from Earthquake/Flooding

The DEIR states "The following policies from the City of St. Helena 2019 General Plan, Public Health and Safety element are relevant to geology, soils, and seismicity issues in the Project site. Policy PS3.1: ***Minimize risk of injury, loss of life and property damage from seismically induced and other known geologic hazards*** (page 3.6-18)."

Page 3.6-22 of the DEIR points out a substantial problem: "It is not acceptable to place compacted, engineered fill (designed to support future development) on the Hunter Parcel without first over excavating and recompacting the existing weak surface layer, due to the anticipated settlement of the weak soil layer as a result of the loads imposed by the new fill, as well as future building loads. Settlement of the weak soil layer, if left in place beneath the recently placed compacted fill, could lead to damage to new residential structures, streets, utilities, and concrete flatwork supported over the weak soil layer."

61-10

Due to the potential for liquefaction and/or settlement of weak soils, the Proposed Project could potentially expose residences to significant impacts from a major earthquake. The DEIR clearly states this is considered a significant impact.

Another safety issue is levee surrounding the Hunter property. It is well known that local news media has reported past correspondence between the City of St. Helena and the Army Corps of Engineers questioning whether the levee was constructed according to accepted engineering and safety standards. As one citizen brought up during public comments at the City Council meeting of 9/14/21, no one -- City of St. Helena staff or the Hunter developer--will answer simple questions in a public meeting regarding which entity, the City or the developer, will take responsibility for possible future damage to health, life or property if the levee protecting the Hunter property should be damaged. Was

61-11

the levee built to current engineering and safety standards? No one seems to want to answer that question affirmatively, with supporting documentation. 61-11 Cont.

Fortunately, page 3.9-12 of the DEIR provides us with a response on this issue: "Where the levee may be overtopped or in a 200+ year flood event, Proposed Project residents would have ample warning to evacuate prior to flooding. Based on a comparison of the base flood elevation to proposed lot pad elevations, flooding of Proposed Project lots would range between 0 and 5 feet in depth, with the deepest flooding occurring on the northern part of the Project site. ***This level of flooding would leave upper floors of residences available for refuge. Because of this, the risks from a 200+ year flood and/or levee failure are limited to property damage rather than risk of life. As previously indicated, this would be an impact of the pre-existing environment on the Proposed Project rather than the Proposed Project's impact on the environment."*** 61-12

Where is the mitigation or measures to protect public safety in this strategy? I remind the reader how readily disease vectors are spread via flood waters, and how toxic mold can grow for years in a structure damaged by a flood. In section 3.9-12, the Hunter project developers are clearly stating "The danger from the levee is just a pre-existing condition of this property, we won't take any responsibility for the outcome, we're going to move forward with this project no matter who is endangered, and the City of St. Helena will be left to deal with the legal and financial consequences." How about not building the proposed project in such an unsafe location? I wouldn't buy any residence under the unsafe circumstances proposed for the Hunter project, but that's just my personal perspective. I'm simply not interested in being trapped in my home's second story while unsanitary flood waters circulate through the lower story. 61-13

I'm wondering which entity, the City or the Hunter project developers, will be legally and financially responsible for any future loss of health, life or property resulting from a levee break or earthquake damage at the location of the proposed Hunter project? 61-14

Traffic and Lack of Emergency Access/Egress

Page 3.14-4 of the DEIR states "Would the proposed project result in inadequate emergency access? This is a less than-significant impact." I do not agree. Based on my 18+ year residence in the area immediately adjacent to the proposed Hunter project, I would like to elaborate on the negative traffic impacts of further residential development in the area. 61-15

Page 3.14-5 of the DEIR states "Under Cumulative conditions, would the proposed project conflict or be inconsistent with CEQA Guidelines section 15064.3(b)? This is considered a significant impact. No mitigation measures available." My understanding is that CEQA section 15064.3(b) pertains to potential negative traffic impacts. On page 3.15-5 the authors of the DEIR thus acknowledge the project will exacerbate traffic problems in the immediate vicinity and there are no mitigating actions possible. 61-16

According to the DEIR page 2-23, "Development of the Project site would require the extension of Adams Street and Starr Avenue onto the Project site to provide two points of ingress and egress…." 61-17

The developed areas adjacent to the proposed Hunter project -- Hunt Avenue/Hunt's Grove/Meadowcreek Circle/Starr Avenue -- have had a crowded street parking situation that has increased over the last decade. In addition to aggravating the impacted neighborhood parking situation, further increasing the density of the adjacent neighborhood housing will directly endanger 61-18

current residents, well as any future residents of the proposed Hunter project, if a sudden emergency evacuation is necessary, given the few points of exit (Pope Street bridge, Main Street) from the area. Responsible addition of 80+ households to this area must require development of *several* additional entry and exit points; the two cited in the DEIR are not sufficient to safely evacuate the planned Hunter development. In addition, due to prior land use agreements made by the City of St. Helena, it is highly questionable whether there will ever be a bridge built crossing the river at the intersection of Adams Street and Silverado Trail. 61-18 Cont. 61-19

The DEIR cites the historic frequency of local natural disasters in the form of floods "...1973, 1978, 1982, 1983, 1986, 1995, 1997, 1998 and 2005 (page 3.9-5)" and wildfires "August 2020 there were a number of wildfires including the LNU Lightning Complex Fire and the Glass Fire that burned large areas of Napa County including a small portion of the Project site (page ES-4)." This week, CHP and St. Helena Police Department reported "Early Monday morning (October 25), a section of Silverado Trail was damaged in a storm-related washout, resulting in a closure at Madrone Knoll Way to Meadowood Lane near St. Helena. Efforts are underway to reopen this section of Silverado Trail as soon as possible. The County expects repair work will begin as early as Friday and anticipates that ***Silverado Trail will be reopened within the next three weeks***." The fragile and limited points of egress on the east side of St. Helena have had a history of creating crisis situations as a result of our frequent natural disasters. Why is increased housing density being considered in an area of St. Helena with so few points of safe entry/exit? Why are the construction of multiple new points of entry/exit not integral to the Hunter Subdivision proposal? Why are the recommendations of the California State Department of Transportation on the development of safe evacuation routes (Evacuation Route Guidance, Design Information Bulletin 93, dated 12/23/20) not being followed in the plans for the Hunter project? 61-20 61-21

In the aftermath of the 2020 Glass Fire, the St. Helena Police Department and Napa County Sheriff launched a media campaign promoting the ZoneHaven evacuation management platform. Why is the City considering endangering the safety of residents by crowding 80+ more households into an evacuation zone with an existing high density housing complex and very few evacuation routes? This seems contradictory to any sort of safe and responsible evacuation plan. Which entity, the City or the Hunter project developers, will be legally and financially responsible for any future loss of health, life or property resulting from a faulty evacuation from the area surrounding the proposed Hunter Project? 61-22 61-23

Right to Fair Housing

Over the last three decades, the vast majority of St. Helena's high density housing units, as well as the majority of St. Helena's low income housing, has been constructed east of Main Street. These cumulative actions are well documented in the past minutes of St. Helena City Council and St. Helena Planning Commission meetings. As a result of actions by past St. Helena City leadership over many years, civil rights violations have emerged over the systematic practice of concentrating high residential density and low income housing in the area east of Main Street in an unbalanced manner. This sustained conduct on the part of past City of St. Helena leadership appears to qualify as discrimination in the conditions of housing under the the jurisdiction of the United States Office of Fair Housing and Equal Opportunity. This discrimination has been inflicted on the entire class of St. Helena residents living east of Main Street. 61-24

When and where will a comparative number of high density or low income housing units be built west of Main Street, in order to mitigate actions that together constitute discrimination in the conditions of housing by past City of St. Helena leadership against the class of residents living east of Main Street? When will a project similar in scope and size to the proposed Hunter project be built west of Main Street?

61-25

These and other protracted local problems will be exacerbated if the proposed Hunter Subdivision project becomes a reality. While the DEIR repeatedly states (pages 2-33, 3.0-1, 3.10-13, 3.10-15, 3.10-17, 3.13-9, 4-5) that the California Housing Crisis Act of 2019 (SB 330) prohibits public agencies such as the City of St. Helena from imposing a moratorium or similar restriction on housing development, the SB 330 legislation provides for an exception which specifically protects citizens and municipalities against development that poses an imminent threat to public health and safety. The Hunter project poses numerous specific threats to the health and safety of current and future St. Helena residents, should the project be built, by compromising:

- environmental/air quality,
- water quality and availability,
- safety from earthquake/flooding
- emergency access/egress,
- the right to fair housing.

61-26

It seems to me that the answer regarding whether or not to move forward with the Hunter Subdivision Project as proposed can be found on page ES-17 of the DEIR: "Of the alternatives evaluated above, Alternative 2, the Park Preserve alternative [eg. maintaining the land as a nature preserve] is the environmentally superior alternative." Taken as a whole, this solution also sounds like the highest and best use of the parcel known as the Hunter Property, in order to responsibly ensure sustained health and safety for current and future residents of St. Helena.

61-27

Best regards,

Sherri Kelly
1192 Meadowcreek Circle

Response to Letter 61
Sherri Kelly
October 27, 2021

61-1 The comment is an introduction to the concerns presented in the comment letter.

The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

61-2 The commenter states their concerns related to Project construction exacerbating existing noise and air quality conditions within the area including generation of fugitive dust.

As discussed in the Draft EIR in Section 3.3, Air Quality, in developing thresholds of significance for air pollutants, the Bay Area Air Quality Management District (BAAQMD) considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be considered cumulatively considerable, resulting in a significant adverse air quality impact to the region's existing air quality conditions. Construction and operation of the Project would not result in an exceedance of the BAAQMD significance thresholds as presented in Tables 3.3-8 and 3.3-9. Furthermore, the Project would implement the BAAQMD's Best Management Practices (BMPs) for fugitive dust control during construction.

Please also see Response to Comment 38-1 regarding noise impacts.

61-3 The commenter opines that the Draft EIR verifies that the Project would result in the probable worsening of existing air quality issues resulting in significant impacts.

Please see Response to Comment 61-2. The Draft EIR concluded that the Project would not result in exacerbating existing air quality conditions and would not result in the exceedance of the BAAQMD thresholds of significance for both construction and operations. Furthermore, heavy-duty equipment on the Project site during construction would emit odors. However, construction activity would be short-term and would cease to occur after construction is completed. Regarding operations, the Project would develop residential uses which is not a typical land use associated with the generation of a source of odors.

61-4 The comment asks whether the City or the Project applicant would be legally and financially responsible for the loss of health, life, or property resulting from the degradation of air quality and the environment under the 6-year Project construction period.

Legal and financial concerns regarding a project are not environmental impacts under CEQA and are not evaluated in an EIR. The comment does not identify

specific areas where the Draft EIR is inadequate; therefore, no further response is required.

61-5 The comment suggests that the City is in a water emergency and upgrades would be necessary to ensure water service is provided to existing residents. The comment also states that the City has contributed to the worsening of the water shortage and many residents incurred fines for excessive water use as a result of City water rationing regulations.

Please see Master Response 2 for information on adequate water supplies.

61-6 The comment describes their personal experiences that suggest ongoing issues with the quality of water provided by the City, and malfunctions at the City sewage treatment plant and goes on to describe their experience with possible water contamination.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

61-7 The comment asks how the City or Project applicant can approve the Project due to the City's water concerns.

Please see Master Response 2 for information on water availability in the City.

61-8 The comment asks whether the City or Project applicant would be held legally and financially responsible for future injury to health, life, or property resulting from the exacerbation of the City's water supply and water quality issues from the Project.

The comment is noted and forwarded to the decision makers for their consideration. Legal liability for a potential future event is not within the scope of CEQA.

61-9 The comment opines that the Project does not adequately address the City's water issues.

Please see Master Response 2 for further information on water supply and availability to serve the Project.

61-10 The comment opines that, due to potential liquefaction/settlement issues of weak soils, the Project could expose residences to significant impacts.

The impact analysis of potential liquefaction hazards at the site is addressed in the Draft EIR beginning on page 3.6-21. The analysis concludes that this hazard is potentially significant. However, Mitigation Measure GEO-1 ensures that a design-level geotechnical report be completed prior to issuance of a grading or building permit. Adherence to this mitigation measure and City Building requirements would

reduce the potential impact to less than significant by incorporating design measures that can reduce potential impacts from liquefaction/settlement to less-than-significant levels.

61-11 The comment asks whether the Napa River levee was constructed according to accepted engineering and safety standards, and whether the City or Project applicant would be responsible for future damage to life, health or property if the levee were to fail.

Legal liability for a potential future event is not within the scope of CEQA. Please see Master Response 3 for more information on the levee.

61-12 The comment asks for a mitigation measure to address the potential impact of the levee overtopping or flooding from a 200-year flood event.

As discussed on page 3.0-1 of the Draft EIR, the purpose of the CEQA analysis is to identify the potential impacts of a project on the environment and not the effects of the environment on the project. However, as noted on page 3.9-12 of the Draft EIR, the potential for failure of the levee has less than a 0.5% chance of occurring in any given year and there would be no substantive risk to human health. Nonetheless, CEQA does not require mitigation for a potential impact of the environment on the Project. Please see Master Response 3 for more information specific to the levee and the Project's Conditions of Approval.

61-13 The comment opines that the Project has legal and financial consequences to the City, and possible public safety consequences. The comment suggests that the Project should not be built in the proposed location because it would be unsafe for future residents.

See Master Response 3 for further information on City liability and Response to Comment 61-4 regarding legal and financial concerns. The comment is noted and forwarded to the decision makers for their consideration.

61-14 The comment asks whether the City or the Project applicant would be legally and financially responsible for any future loss of health, life, or property resulting from a levee break or earthquake damage to the Project.

Determinations of legal liability for a potential future event is outside the scope of CEQA. Please see Master Response 3 for information regarding the levee. Additionally, please see Response to Comment 61-10 regarding how any potential earthquake hazards would be mitigated.

61-15 The comment opines that the Proposed Project would result in inadequate emergency access.

Please see Master Response 1 that addresses emergency access concerns.

61-16 The comment notes the conclusion in the Draft EIR that the Project would be in conflict with CEQA Guidelines Section 15064.3(b).

Traffic is evaluated in Section 3.14 of the Draft EIR, which analyzes the Project's increase in vehicle miles traveled (VMT), consistent with CEQA Guidelines Section 15064.3(b). The analysis concludes that the Project would have a significant and unavoidable impact due to an increase in VMT. Since the comment does not elaborate, or provide any substantial evidence to support the claim that the Draft EIR is inadequate, no further response is required.

61-17 The comment re-states the text on page 2-23 of the Draft EIR regarding the extension of Adams Street and Starr Avenue onto the Project site to provide two points of ingress and egress.

The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

61-18 The comment states an opinion that parking is congested in the neighborhood and that overall traffic congestion will hinder emergency evacuation in the area.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements. Please see Master Response 1 for information regarding emergency vehicle access.

61-19 The comment opines that the addition of more than 80 new households must require several additional entry and exit points, in addition to the two cited in the Draft EIR. The comment also questions whether there will be a bridge built crossing the river at the intersection of Adams Street and Silverado Trail.

The Project provides two points of access along with emergency evacuation access, consistent with City requirements for this type of development. The commenter's opinion that additional points of access area required is noted and forwarded to the decision makers for their consideration. Additionally, please see Master Response 1 regarding emergency evacuation. The Proposed Project does not include the construction of a new bridge and does not involve any further extension of Adams Street, east of Starr Avenue. Any extension of Adams Street connecting to Silverado Trail would require further study and approval by the City and is not required for this Project.

61-20 The comment notes that the Draft EIR acknowledges the historic frequency of floods and wildfires in the Project vicinity and states the commenter's opinion that the limited points of egress on the east side of the City have a history of creating crisis situations.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. However, please see Master Response 1 for additional information regarding emergency evacuation.

61-21 The comment asks why increased housing density is being considered in an area of the City with few points of safe entry and exit and why the recommendations of the California Department of Transportation regarding development of safe evacuation routes have not been followed.

Please see Master Response 1 for information regarding emergency evacuation.

61-22 The comment references a past media campaign promoting the ZoneHaven evacuation management platform and asks why the City is considering endangering the safety of residents by introducing new households to an area with few evacuation routes.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. However, please see Master Response 1 for additional information regarding emergency evacuation.

61-23 The comment asks whether the City or the Project applicant would be legally and financially responsible for any future loss of health, life, or property resulting from evacuation failures around the Proposed Project.

Legal liability for a potential future event is outside the scope of CEQA. Please see Master Response 1 regarding emergency evacuation and Master Response 3 regarding City liability and Response to Comment 61-4.

61-24 The comment states an opinion that most high-density and low-income housing in the City has been constructed east of Main Street and that these actions qualify as discrimination under the jurisdiction of the U.S. Office of Fair Housing and Equal Opportunity.

The comment does not address the adequacy of the Draft EIR, but instead expresses the commentor's opinion about the Project. The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

61-25 The comment asks when a comparative number of high-density or low-income housing units, or a project similar in size and scope to the Proposed Project would be built west of Main Street in order to mitigate for past "discrimination."

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

61-26 The comment states an opinion that the Project would pose an imminent threat to public health and safety and therefore qualifies as an exception to the California Housing Crisis Act of 2019 (SB 330), which prohibits the City from restricting housing development.

The comment does not address the adequacy of the Draft EIR, but instead expresses the commentor's opinion about the Project. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

61-27 The comment supports Alternative 2, the Park Preserve alternative, as the best use of the Project site.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

C

Comment Letter 62

From: Sherri Kelly <sherrikelly1192@gmail.com>
Date: November 3, 2021 at 12:48:17 PM PDT
To: Mark Prestwich <MPrestwich@cityofsthelena.org>, Geoff Ellsworth <GEllsworth@cityofsthelena.org>, Paul Dohring <PDohring@cityofsthelena.org>, Anna Chouteau <AChouteau@cityofsthelena.org>, Lester Hardy <LHardy@cityofsthelena.org>, Eric Hall <ehall@cityofsthelena.org>
Subject: [External] citizen request

Dear Mr. Prestwich, Mr. Ellsworth and City Council members,

I have been the owner and resident of 1192 Meadowcreek Circle since 2003. I have been employed since 1991 as a teacher at St. Helena Unified School District. As both a long time resident and local educator, I believe the complex issues surrounding the proposed Hunter Subdivision project warrant adequate time and attention, in order to gain complete understanding of the project plan and all foreseeable consequences that this project will bring to the residents of St. Helena. 62-1

I'm a single parent who is employed full time. The Hunter DEIR is 638 pages long and the appendices total an additional 1940 pages. I am not an expert on the topics of property development, hydrology and soils, effective emergency evacuation strategies or flood control engineering. During the last 40 days, I have spent hours reading and studying the DEIR, and I'm nowhere close to being able to describe myself as an adequately informed citizen on the Hunter Subdivision proposal. 62-2

If I'm having trouble gaining full access the important information in the DEIR during the limited 45-day statutory timeline, I can only imagine that there are many other St. Helena residents who are unable to access or begin to understand the important information in the DEIR due to the document language, complexity and lack of sufficient time.

At last night's Planning Commision meeting, Commissioner Daniel Hale stated that only senior City staff had the authority to extend the statutory 45-day DEIR review deadline. He was not specific in identifying who those City staff were, so I'm writing to all of you. I am requesting the 45-day statutory DEIR review period be extended, so that all local residents have their rightful access and the opportunity to completely understand the contents of the DEIR document. 62-3

Sincerely,
Sherri Kelly

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Response to Letter 62
Sherri Kelly
November 3, 2021

62-1 The comment provides the commenter's personal history as a resident of the City and requests that the Project be studied in order to gain complete understanding of its consequences.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

62-2 The commenter states they have not been able to review and understand the Draft EIR in the public review timeframe provided.

The public was provided a 67-day period ending on November 30, 2021, exceeding the required 45-day period. The commenter's request for additional time to review the EIR is noted.

62-3 The commenter requests that the 45-day public review timeframe be extended.

Please see Response to Comment 62-2.

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Comment Letter 63

From: Pat Kenealy <pkenealy1@yahoo.com>
Sent: Tuesday, November 2, 2021 10:22 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Opposing Hunter Subdivision

Please do NOT approve the Hunter subdivision. 63-1

The water needs of the project and the traffic it will produce are bad for our dry and traffic-jammed City. The sewer and flood prevention costs and risks are too great for the City's strained infrastructure and financial situation. 63-2

Saint Helena needs to get better, not bigger.

Thank you for soliciting public input on this ill-advised project which threatens the quality of life of all Saint Helenans 63-3

Patrick Kenealy
2995 Spring Street

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Response to Letter 63
Pat Kenealy
November 2, 2021

63-1 The comment states general opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

63-2 The comment expresses general concern regarding the Project's impact on traffic, the City's sewer system, and flood protection.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. Master Response 3 addresses concerns related to flooding and flood protection and Master Response 4 addresses wastewater.

63-3 The comment states opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

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Comment Letter 64

City of St. Helena

I am writing to comment on the DERI for the Hunter project. There are so many reasons to object to this project. There is no water neutrality, loss of conservation easements, the proposed affordable housing does not conform to the Municipal Code, traffic over a railroad track which has a F rating from Caltrans and cannot be mitigated without opening Starr Avenue and building a new bridge over the Napa River and on and on. 64-1

However, an important reason is overlooked in this report and one that is an albatross for the city and stirred heated discussion since its beginning: The St. Helena Levee on the Napa River. There is positive to the levee project, but also many mistakes not the least of which is the missing monies never accounted for and continuing worries of no current comprehensive flood-risk management.

The width of the St. Helena levee was built wider than it was intended or needed to be, a size that took the levee wide of the Vineyard Valley property it was made to protect, resulting in a large 16.9-acre agriculture floodplain undeveloped and empty. On Sept. 8, 2010, a developer saw an opportunity and purchased this floodplain acreage. Then submitted plans to convert agricultural land into high density housing including 87 new residential units, this despite an explicit provision in Measure A that "none of these projects (levees) are intended or designed to encourage population growth." 64-2

The limitation on building expensive homes and apartments on this floodplain are many, not the least of which is how will the homeowners be able to purchase insurance for homes built in a flood plain? Will the city be responsible for damages if the levee fails? 64-3

St. Helena now has a chance to bring this to an end and avoid construction of 87 new homes behind the levee. "Floodplain managers, river scientists, and prudent leaders worldwide counsel that levee protection is never absolute, and that even the tallest and strongest wall comes with an inherent residual risk, a small but real possibility that it may fail or be overwhelmed during future floods....St. Helena should understand that levee protection brings a range of consequences, including the possibility of multiplying, not diminishing, the long-term risk of damage and potentially even loss of life in their community." 64-4

I sincerely assume good intent when I ask the Planning Commission and then the City Council to thoroughly understand and preform due diligence into these issues. Best regards, Susan Kenward. St. Helena. 64-5

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Response to Letter 64
Susan Kenward

64-1 The commenter states their opposition to the Project. In particular, the commenter raises concerns related to water neutrality, conservation easements, traffic and the Project's compliance with the City's Municipal Code.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. However, please refer to Master Response 2 regarding water neutrality, Response to Comment 45-2 regarding affordable housing and the City's Municipal Code, and Responses to Comments 32-6, 57-9 and 61-10 regarding traffic on Railroad Avenue and building a new bridge over the Napa River. Please see Response to Comment 36-3 regarding the easement.

64-2 The comment expresses concern related to the Napa River levee. In particular, the comment claims that the levee project was financially mismanaged and that there are ongoing concerns related to flood-risk management. The comment claims the levee was built wider than intended or needed and that the Project conflicts with a provision in the City's Measure A agreement.

The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required. Please see Master Response 3 for more information regarding the levee and Measure A.

64-3 The comment expresses concern related to future homeowner's ability to purchase flood insurance and also questions who would be liable for damages associated potential levee failure.

The Project site is outside of a FEMA special flood hazard area; therefore, purchase of flood insurance would not be required. However, because there remains residual risk of flooding from catastrophically large floods (such as a 500-year flood) or levee failures, property owners would have the option to purchase flood insurance. Regarding the liability for damage in the event of a catastrophic flood event, please see Master Response 3.

64-4 The comment provides an unreferenced quote that states levee failure is a possibility and urges the City to assess long term risks associated with levee protection.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. However, please refer to Master Response 3 for more information specific to the levee and potential flood risks.

64-5 The commenter requests the City's Planning Commission and City Council perform due diligence when reviewing the Project.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

Comment Letter 65

From: Grace Kistner <gdkistner@comcast.net>
Sent: Tuesday, November 23, 2021 3:02 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Proposed Hunter Project EIR Comments

Hi Maya,

My comments regarding the Proposed Hunter Development begin with Napa Counties Measure A Ordinance that was passed with over two thirds of Napa County Voters in March 1998. 65-1

I am attaching a copy of the Measure A Ordinance in its entirety. However the part of this Ordinance that is pertinent to the proposed Hunter Development is in:
Section 2 Findings, Paragraph G which states:

"None of the projects in the Plan are intended or designed to encourage population growth in Napa County. All of the projects are for flood protection, preserving ground water integrity, reducing sediment in the Napa River system, and for maintaining the reliability of the water supply for existing Napa County population of the date of this Ordinance." 65-2

The proposed Hunter has 51 Single Family Homes, 11 ADUs and 25 Multi-Family units which when sold or rented would increase the population significantly in St. Helena a City of about 6000 residents. 65-3

Flood protection to the existing residents would be greatly decreased and possibly put existing St. Helena residents in jeopardy due to the increase in concrete and asphalt required to build roads and driveways that would be necessary for the proposed project. This increase in hard surfaces in case of heavy rains would cause water to run off to the lower areas south of the project. In addition these hard surfaces would produce more sediment flowing to the Napa River. 65-4

Additionally the use of the well water for landscaping would not be helpful in preserving ground water integrity. Also the use of City water for this project would not maintain the reliability of the water supply for existing residents. 65-5

Measure A in itself should be grounds for denying the Proposed Hunter Project. 65-6

Grace D. Kistner
25 San Juan Court
St. Helena, Ca

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Response to Letter 65
Grace Kistner
November 23, 2021

65-1 The comment states a concern related to the Project's compliance with Measure A.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. However, please refer to Master Response 3 and Response to Comments 35-6 and 57-3 regarding Measure A.

65-2 The comment provides an excerpt from Measure A stating that projects funded under this Measure are not intended to encourage population growth.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. However, please refer to Master Response 3 and Response to Comments 35-6 and 57-3 regarding Measure A.

65-3 The comment states there would "significantly" increase the population of St. Helena.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. The Draft EIR projects that the Project would add 213 residents to the existing population (6,049 as of 2020), an increase of 3.5% that is within the population growth estimates in the adopted 2040 General Plan.

65-4 The comment claims that flood protection to existing residents would decrease due to the Project because of an increase in impervious surfaces. The comment also states that an increase in impervious surfaces would also produce more sediment flowing into the Napa River.

Please see Response to Comment 35-4. Regarding increased sediments flowing into the Napa River, the Draft EIR addresses this concern in Chapter 3.9, Hydrology and Water Quality. Specifically, on page 3.9-45 the Draft EIR concludes the impact water quality would be less than significant, because compliance with existing permitting requirements and conditions of approval (i.e., MS4 Permit and the City's Stormwater and Runoff Pollution Control Ordinance) are sufficient to avoid water quality degradation (including erosion and siltation).

65-5 The comment raises a concern related to the Project's proposed use of well water and its impact on groundwater supply.

Please refer to Response to Comment 57-5 and Master Response 2 regarding the use of well water and the reliability of water supply.

65-6 The comment states that Measure A should be grounds for denying the Project.

Please refer to Master Response 3 regarding Measure A.

An attachment to this letter can be found in Attachment B.

Comment Letter 66

From: Grace Kistner <gdkistner@comcast.net>
Sent: Monday, November 29, 2021 7:18 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter EIR

The Proposed Hunter Project is definitely a residential development project and therefore falls the St. Helena zoning code 17.146. Residential Development Project Inclusionary which states that "A least twenty (20%) of all new dwelling units in a residential development project shall be affordable units, which shall be constructed and completed no later than the related market rate units." 66-1

Section I Basic Requirements for Owner-Occupied and Rental Affordable Units

Section I states: Affordable units shall be comparable in number of bedrooms, exterior appearance and overall quality of construction to market rate units
in the same residential project. Subject to approval of the planning commission, square footage of affordable units and interior features
in affordable units need not be the same or equivalent to those in market rate units in the same residential project so long as they are of
good quality and are consistent with contemporary standards for new housing.
Affordable units shall be dispersed throughout the
project, or subject to the approval of the planning commission may be clustered within the residential project when thus furthers
affordable housing opportunities." 66-2

In looking at the Project Description In The City Of St. Helena Notice Of Availability, Hunter Sub Division Project it appears that 16.9-acre parcel is proposed to contain fifty one (51) Single Family Market Homes and Eleven (11) ADU's.
Chapter 17.146 of the ST. Helena Zoning would require twenty (20) percent of the homes to be affordable in the 16.9 acre. This project should be denied as it is now proposed. 66-3

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Response to Letter 66
Grace Kistner
November 29, 2021

66-1 The comment states an opinion that the Project is not compliant with Chapter 17.146 of the City's Municipal Code, which requires a percentage of new dwelling units to be affordable units.

The comment does not address the adequacy of the Draft EIR and is referencing requirements of the City's Inclusionary Housing Ordinance. The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. Please see Response to Comment 2-3 that addresses the Project's affordable housing requirement.

66-2 The comment provides an excerpt of Chapter 17.146 of the City's Municipal Code which describes requirements for owner-occupied and rental affordable units under the City's Inclusionary Housing Ordinance.

The comment does not address the adequacy of the Draft EIR and is referencing requirements of the City's Inclusionary Housing Ordinance. The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no further response is required. See Response to Comment 66-1.

66-3 The comment summarizes the Project's proposed residence types and expresses that the Project should be denied because, in the commentor's opinion, it is not compliant with Chapter 17.146 of the City's Municipal Code.

The comment does not address the adequacy of the Draft EIR, but instead expresses the commentor's opinion about the Project. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. Please see Response to Comment 2-3.

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Comment Letter 67

-----Original Message-----
From: Pamela Koussa <blueglow702@gmail.com>
Sent: Saturday, November 6, 2021 6:34 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter project

To whom it may concern, I do NOT want the Hunter project to happen, mostly because all (51) homes will be 2-story. Not everyone wants stairs in their homes. This project is a very awful thing if it does get approved. Please have the developer include single story homes also or else deny their application. Pamela. 67-1

Sent from my iPhone

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Response to Letter 67
Pamela Koussa
November 6, 2021

67-1 The comment states opposition to the Project because two-story residences are proposed.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

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Comment Letter 68

From: Laurel Krsek <laurel.krsek@gmail.com>
Sent: Tuesday, November 2, 2021 8:16 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Draft EIR # 2108032014 (The Hunter Project)

Maya DeRosa,
Planning & Building Director
City of St. Helena Planning Department
1572 Railroad Avenue, St. Helena, California 94574

Dear Ms DeRosa,

In regard to the Draft EIR # 2108032014 (The Hunter Project), Transportation and Circulation, I'm strongly opposed to the development of this project. In my opinion the proposed project is completely inadvisable until our community-wide traffic and emergency access issues are addressed. 68-1

I've lived in St. Helena for 32 years and have experienced the greatly increased volume of traffic on Pope Street, Starr and Hunt and the frequent difficulty accessing the Silverado Trail via the Pope Street bridge. The addition of the Hunter projects' 100+ households with their associated vehicles makes no sense without an outlet from Highway 29 to the Silverado Trail other than the Pope Street bridge. We already experience serious daily traffic congestion. During emergencies on the Silverado Trail or Highway 29 and in the event of an evacuation we have few existing routes out of the area. Until suitable roads and city infrastructure are in place, the addition of more housing units in this proposed isolated neighborhood is irresponsible. 68-2 68-3

Laurel Krsek
1125 Peppertree Circle
St. Helena

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Response to Letter 68
Laurel Krsek
November 2, 2021

68-1 The comment states opposition to the Project and requests community-wide issues related to traffic and emergency access should be addressed

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. The analysis includes consideration of motorized vehicle traffic impacts on roadway capacity, vehicle-miles traveled (VMT), and potential impacts to transit, bicycle, and pedestrians. Please also see Master Response 1, that provides more details specific to the maintenance road for emergency evacuation for both Vineyard Valley residents and Project residents.

68-2 The comment states a concern that the Project will negatively impact traffic conditions.

Potential Project traffic impacts are analyzed in detail within Section 3.14 Transportation of the Draft EIR and within Appendix K, Traffic Impact Study. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no additional response is required.

68-3 The comment states the commentor's concern related to emergency evacuation and states the Project should not be approved.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. Please see Master Response 1 that addresses emergency access concerns.

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Comment Letter 69

From: gail lane <gail@winestates.com>
Sent: Saturday, October 30, 2021 5:50 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter project

I would like to share my serious concerns regarding this project. 69-1

My family settled in St. Helena 7 generations ago. I've lived in St. Helena most of my 68 yrs. I've founded several businesses, always looking out for the best interest of our small community.

This project is drastically going to impact traffic on Pope, Starr, Hunt & Adams streets. I understand the owner has a well but our water situation will still be impacted. 69-2

Our water table has already been depleted irrigating vineyards. But we are an agricultural county and growing grapes is a priority. 69-3

The Glass Fire damaged our city's water supply. We're still in a serious draught. How can our city's resources properly manage all these new homes and homeowners? 69-4

We need affordable housing. But there must be a better solution than filling an open space in town with over 51 new homes. 69-5

Starr Ave is littered with cars before/after work and on weekends right now. The residents in the apartment complex at the end of Hunt have never had enough parking. They are forced to park and walk several blocks just to get to their apartment. Starr Ave residents have cars lined up in front of their own homes, leaving no room for guests. 69-6

I oppose this project due the size of it, the impact on water resources, city sewer & traffic. 69-7

Thank you.

Gail Morgan Lane
Broker/Owner
BRE# 01026604

St. Helena Real Estate
1346 Main Street
St. Helena, CA 94574
T 707.967.9570
C 707.291.0156
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gail0634@gmail.com
gail@winestates.com
www.winestates.com

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Response to Letter 69
Gail Lane
October 30, 2021

69-1 The commenter states their history as residents of the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

69-2 The comment raises general concerns related to the Project's impact on traffic and the City's water supply.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 2 related to water supply. The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. Please see Responses to Comments 57-8, 57-9, and 57-10 regarding traffic concerns.

69-3 The comment states agriculture should be a priority for the area.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

69-4 The comment raises a general concern related to the Project's impact on the City's water supply.

Please see Master Response 2.

69-5 The comment acknowledges the need for affordable housing but indicates another project could meet this need.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

69-6 The comment raises a concern related to the Project's impact on local parking.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the

Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements.

69-7 The comment states opposition to the Project due to its impact on water, the City's sewer system, and traffic.

Please see Response to Comment 69-2 and Master Responses 1 for water supply and 4 for concerns regarding wastewater. Traffic impacts are evauated in Section 3.14 of the Draft EIR.

Comment Letter 70

Marina Lavagnino
Jenna Lavagnino
15 Del Rio Ct.
Saint Helena, Ca 94574

November 29, 2021

Ms. Maya DeRosa, Planning & Building Director
City of Saint Helena
1572 Railroad Avenue
Saint Helena, CA 94574

Re: **Hunter Project Draft Environmental Impact Report**

First, we want to thank you for extending the comment period. We only learned of this project midway through October, even though we moved to a home less than 100 feet from the proposed development in July. Neither my sister and I, nor the previous owners, received a notice regarding the DEIR. It took some time to get up-to-speed. We appreciated the opportunity to participate in the first public comment discussion of the DEIR, and look forward to the second.

70-1

About us: we live on Del Rio Ct. Our grandparents moved to Vineyard Valley in 1975 and went through two floods. Our mother moved here in 1993 and stayed through one flood. One of us moved here in 2017, and the other moved 'home' to Saint Helena this summer. We walk or ride a bicycle along the berm almost every day. One of us works from home, where our office looks directly out onto the beautiful land that is affected by this project. We talk to the people who walk, run and ride through this area of St. Helena, watch the wildlife, observe the colors of the sky, fog and vineyards, hear the birds, crickets and frogs.

We realize that we do not have the time or resources to adequately make sense of the details found in this report. We see that in most instances the writers of the report come to the conclusion that the issues raised can be resolved and will ultimately not have a substantial impact on our town. In a perfect world, that might be true, but our world is far from perfect.

In this letter we address three of the 15 areas of consideration in the DEIR: 10) Land Use, 12) Public Service and Recreation, and 13) Utilities and Service Systems (in reverse order.)

Utilities and Service Systems

Water. St. Helena does not currently have enough water to meet the needs of the current residents. It is one thing to let grass go brown in the summer, but another to outlaw watering trees and ask residents to severely curtail water usage. We either have a big problem and no solution, or the warnings of water shortages are over-hyped. Drought years will happen. Until

70-2

we have a more reliable way to meet the needs of the current citizens of St. Helena, we should stop inviting people to move here. We have read through the details of the 2010 plan, and the 2019 plan. The projected water deficit, in every scenario, is troubling. You seem to be balancing the water problem by anticipating that the current extreme water conservation will continue, while threatening people who live here now that things could be much worse before they get better.

70-2 Cont.

Wastewater and stormwater drainage are also serious concerns. Living immediately adjacent and 4 - 20 feet closer to sea-level than the anticipated homes is a real concern. We suggest that St. Helena take a close look at previous wastewater problems in this location and find a way to avoid future problems.

70-3

Public Service and Recreation

There is so much to review within this section. 2.45 persons per household for the purpose of calculating park and recreation facility demands is very different from the 8 persons per 4 bedroom home estimate used in the Utilities section. 12 elementary students among 87 residential units seems low. We would be interested in seeing what the numbers are at Hunt Street.

70-4

We will focus on recreation here. In section 3.12-16 it is stated that the City would have a ratio of 4.48 acres per 1,000 residents, which falls below the goal of 5 acres per 1,000 residents. So we would be short almost 5 acres of this goal, and about **40 acres short of the nationally recommended standard mentioned**. Don't we in St. Helena desire and deserve the higher standard?

70-5

What this section woefully ignores is the recreation usage that will be taken away by this development. Yes, there are parks in St. Helena. Table 3.12-2 lists 11 parks, 8 of these are mini parks. None of these parks provide a connection to the grandeur of St. Helena's position in the Napa Valley. There is a reason why so many St. Helenan's flock to the maintenance path, and it is not to look at the gravel beneath our feet. Walking along the berm provides a view of Mt. Saint Helena, both sides of the valley, beautiful vineyards, unique architecture with water towers and barns, a meadow, a habitat restoration area and a river, all of which are home to numerous wildlife, and a tremendous view of the sky. From glorious sunrise to inspiring sunset people come to this area to experience nature. It is convenient to the center of town and the library. It is free and currently available to all. It is a natural resource that provides space that we need, that isn't available in any of our 11 parks. This resource should be better understood if we are trying to document St. Helena's recreational facilities. It will be drastically diminished if homes are built up to the edge of the maintenance road.

70-6

Land Use

We need to have our utility needs met, and we need adequate access to outdoor recreation. We also need affordable housing. The people who work in St. Helena and the surrounding Napa Valley need safe places to live that do not require a 1 hour plus commute each way. It would be wonderful to build such housing in St. Helena, perhaps some of it on a portion of this parcel.

70-7

But what is shown on the drawings is so far from what seems acceptable or even legal that others will surely point out the numerous faults. There are two sections of affordable housing near us in St. Helena: the apartments next to Napa Valley College, and those on Hunt Street. Both of these are beautiful developments that feature something the Hunter Project seems to be lacking - common space. Where is the playground, the soccer field, the community garden, the dog park, the lawn? We know what works and what is meaningful for our community. When we propose affordable housing, let's do it like we value the people who will live in it.

70-7 Cont.

In Conclusion

We have a Planning Department for a reason - to make sure that future development meets the needs and goals of St. Helena. A lot of time has gone into preparing this document. It is inspiring to see how many thoughtful policies have been developed over the years to help guide us to a happy future. Now we have an opportunity to think about what will serve us - and what will not.

70-8

Thank you for your consideration-

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Response to Letter 70
Marina and Jenna Lavagnino
November 29, 2021

70-1 The commenter thanks the City for extending the Draft EIR comment period and states the commenters did not receive prior noticing.

Please see Response to Comment 15-4 regarding noticing. The comment does not identify any specific areas where the Draft EIR or analysis is inadequate, therefore, no response is required.

70-2 The comment raises concerns regarding the City's water supply and states that the City should not allow for new residential development.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 2 that addresses water supply and the City's Water Neutrality Policy.

70-3 The comment raises concern related to the Project's impact on wastewater and stormwater drainage.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 4 that addresses wastewater concerns and Response to Comment 35-4 which addresses general stormwater drainage concerns.

70-4 The comment notes that the 2.45 persons per household used to calculate park and recreation facility demands is different from the eight persons per 4-bedroom home estimate used to calculate demand for utilities. Additionally, the comment states an opinion that the Project's estimate of 12 elementary school students seems to be low. The commenter is interested to know the number of elementary students at Hunt Street residences.

See Response to Comment 7-3, regarding household size calculations.

Student generation rates were derived from the St. Helena Unified School District (SHUSD) Facility Master Plan, which outlines expected growth in demand for school facilities associated with projected development and plans how to fund and respond to such growth. Each school district develops their own student generation rates. Residences at Hunt Street are not a part of this Project; thus, no response is needed.

70-5 The comment states an opinion that the City's parkland ratio would fall short of the City's goal of 5 acres of parkland per 1,000 residents and the nationally recommended standard of 10.5 acres of parkland per 1,000 residents. The comment states that City residents desire and deserve to have the nationally recommended parkland ratio standard.

As stated on page 3.12-16 of the Draft EIR, based on the City's 2018 population of 6,196 residents and park acreage of 27.43, the City's parkland to resident ratio is 4.43 acres per 1,000 residents. This parkland to resident ratio is lower than the City's goal and lower than the nationally recommended standard, even without development of the Proposed Project. Assuming the addition of 213 new residents to the City, the City would have a ratio of 4.28 acres of parkland per 1,000 residents. Park and recreational impact fees would be imposed on the Project and these impact fees would be used to cover the cost of parkland acquisition and park improvements. The Project applicant would pay these impact fees as stipulated in the City's Municipal Code Chapter 3.32, consistent with the Quimby Act. These park fees would be used by the City to purchase land to construct new parks or upgrade existing recreation facilities. The comment is noted and forwarded to the decision makers for their consideration.

70-6 The comment states an opinion that the Public Services and Recreation section of the Draft EIR does not acknowledge the recreational land that will be removed by the Proposed Project. The commenter suggests that the levee maintenance road could be considered a recreational facility.

As stated on page 3.12-5 of the Draft EIR, the levee maintenance road is not a City recreational trail but is used informally as a trail by local residents. Additionally, the maintenance road is not a part of the Proposed Project. There is an existing City trail located on the northside of the levee maintenance road that would not be affected by the Project. A small portion of the maintenance road would be paved to accommodate construction of the Adams Street extension, but sidewalks would be provided along the extension of Adams Street to provide a safe connection to the remainder of the maintenance road and the trail, which would remain unaltered by the Proposed Project. Please see Chapter 3, Changes to the Draft EIR for a figure that shows the adjancent trails.

70-7 The comment states an opinion that the Project would not add any recreational or common space areas, and asserts that nearby existing affordable housing developments provide these areas.

The commenter is correct that the Project does not include any on-site parks or -recreational facilities. However, as stated in Response to Comment 70-5, the Project applicant would pay park fees which would be used by the City to purchase land to construct new parks or upgrade existing recreation facilities. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is

required. However, the comment is noted and forwarded to the decision makers for their consideration.

70-8 The commenter reflects on the purpose of the City's Planning Department and states that the Project gives the community an opportunity to evaluate what will best serve the community.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 71

From: Lou Lavigne & Nancy Rothman
Fulton Lane
St. Helena

Subject:Hunter Project EIR

Dear Planning Commission:

We built our home on Fulton Lane (on the former Napa Valley Oriental Nursery site) after investigating the prior history of rejection of development on the Hunter site and the resultant preservation of the levee. We also explored the flood risk in this immediate area and concluded that the levee and existing drainage ditches/swales on Fulton Lane provided a reasonable level of protection. This new Hunter project proposal (which is literally in our backyard) is a significant concern to us for a number of reasons enumerated below and we strongly recommend its permanent rejection. 71-1

-Flood risk-It is difficult to see how building inside the levee on the floor of the basin is a safe proposition…who is going to assume the liability..the City or FEMA? Then there is the question of flood risk to the surrounding area starting in particular with Vineyard Valley ….? 71-2
We are also concerned that if the levee is compromised the two major drainage ditches from Fulton Lane will be overwhelmed and flood water will back up toward Fulton Lane as well. This already occurs in heavy rains to some extent near the outside base of the levee due to the congested connection of the Fulton drainage ditches and poor maintenance of the ditches which apparently is a City responsibility. 71-3

-Water Supply & Sewage -how any proposal to add 20 acre feet of water use (or 6.5 million gallons…more graphic) to St. Helena's already constrained water supply could be justified based on the ludicrous idea of retrofitting 333 offsite homes or paying ~$597,000 in lieu fees just doesn't compute without an identified plan.. Where is the water going to come from? St. Helena already has constraints on obtaining more water supply? Then there is the proposed use of abandoned wells being activated for the landscaping..where are these wells and is that practical without jeopardizing the other wells of vineyards and residents in this area. 71-4 71-5
Then there is the other side of the new water usage….Sewage..how the City's sewage system and plant could be made to handle even an additional 6.5 million gallons of waste water is a major challenge considering current City finances and sewage needs. 71-6

-Traffic-St Helena recently had a good taste of incremental traffic on Pope Street and surrounding streets with the rain caused closure of Silverado Trail; not a pleasant experience.
The proposed project adds traffic issues on at least two fronts
If as the developer proposes Starr Ave. were extended to an extended Adams Street the resultant short-cut speedway from Pope Street to Main street via Starr and Adams will further the traffic jam at Railroad and ultimately Main Street. Any proposal to add stop lights on this route would risk increasing speeds in a residential area with drivers attempting to make the light/s. Then there is the added traffic resulting from the residents and their visitors and vendors of the proposed development which will also feed into the extensions of Adams and Starr….plus the incremental intersections added by the proposed project would further add traffic hazards and congestion potential. 71-7
The intersections of Pope and Starr, the extended Starr and Hunt, Starr and the new street in the proposed development and the intersection of the extended Adams and Starr plus a new proposed street in the development linking with Adams at that same proposed intersection are all going to add congestion and pollution in a residential and agricultural neighborhood. 71-8

-Parking-while the project allows for parking it is hard to see based on other areas of the City where development has occurred that the proposed project doesn't add additional cars parking on-street further adding to congestion and adding more hazards for traffic, pedestrians and bicyclists. 71-9

-Hiking Trail—everyday we see many people hiking on the City Trail alongside and the one on top of the levee literally all the way to the Napa River…a beautiful walk in surrounded by vineyards and much nature as it is also a natural habitat in places. To systematically destroy the rural charm of St. Helena including this hiking trail plus replacing vineyards with houses and streets is short sighted in our view. 71-10

-Affordable Housing-we recognize and support the need for additional affordable housing, however, to build it in a flood risk area and to add a major residential development with all the issues raised here and by others seems like an inefficient way to get there. The City should fully explore other more development efficient alternatives. 71-11

-Financial strength of the developer—while this isn't a topic for the EIR per se it becomes one that needs to be carefully evaluated and monitored due the disruptive nature of the proposed project to the current site and neighboring areas and the estimated long six year duration of the project. Were this ill advised project to be attempted without the City having financial assurance from the developer (perhaps in the form of a bond) that it would be completed would add an additional risk as an interruption in construction, drainage etc. could result in incremental flood and other risks…plus an eyesore of a partially completed project. 71-12

In conclusion we have been unable to find the benefit to St. Helena and its residents of this proposed development. It all seems like a major step toward impairing the character of St. Helena which makes it a wonderful place to live and turning it into another congested suburb with strained municipal resources. We are totally against the proposed Hunter project. 71-13

Thank you, Lou Lavigne and Nancy Rothman
11/29/21

Response to Letter 71
Lou Lavigne and Nancy Rothman
November 29, 2021

71-1 The comment provides personal history of the commenters, stating they built their home on Fulton Lane after considering the history of the Project site. The commenter recommends the Project not be approved.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

71-2 The comment raises a concern related to the Project's location due to its proximity to the levee and asks who would assume liability in the event of a flood.

Please see Master Response 3 regarding the levee and liability in the event of a flood. Determinations of legal liabiloity for a potential future event is not within the scope of CEQA.

71-3 The commenters expresses their concern that the Napa River levee could be compromised. The commenter is specifically concerned about two drainage ditches along Fulton Lane, stating that they could be overwhelmed and flood water could back up to Fulton Lane. The commenters assert that these drainage ditches are currently overwhelmed during heavy rain events due to congested connection and poor maintenance.

Please see Master Response 3 regarding the levee. As stated on page 3.9-12 of the Draft EIR, the modern design and construction of the levee (along with the City's ongoing inspection and maintenance of the levee) substantially reduces its potential to fail in a 200-year flood or in the event of an earthquake. The Proposed Project would not result in any changes to the drainage ditches along Fulton Lane or exacerbate existing flood risk, as explained in Section 3.9, Hydrology and Water Quality. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

71-4 The comment expresses a concern with the Project's impact on the City's water supply and states that retrofitting of plumbing fixtures and/or payment of in lieu fees is not adequate (per the City's Water Neutral Policy).

Please see Master Response 2 regarding the City's water supply and Water Neutral Policy.

71-5 The comment opines that the City has limitations on obtaining more water supply and mentions the Project's proposed use of groundwater for landscaping. The comment questions the location of the proposed well and whether use of the well would jeopardize other wells in the area.

Please see Master Response 2 regarding the City's water supply and Response to Comment 57-5 regarding use of the existing well for landscaping.

71-6 The comment raises concern related to the City's sewer system, specifically the commenter's opinion that the City does not have capacity to treat additional sewage generated by the Project.

Please see Response to Comment 38-1 and Master Response 4 regarding City wastewater conveyance and system capacity.

71-7 The comment opines that the extension of Adams Street to the Project site may increase cut-through traffic along Starr Avenue and Adams Street and asserts that stop lights along this route would not be feasible.

Section 3.14, Transportation and Circulation of the Draft EIR analyzes traffic congestion and vehicular queuing along Starr Avenue and Adams Street, and concludes that impacts would be less than significant. This includes future year analysis scenarios with and without the traffic of the proposed project. Further, the Draft EIR does not recommend stop lights along any stretch of Starr Avenue or Adams Street.

71-8 The comment states an opinion that the Proposed Project would result in traffic congestion and pollution within the neighborhood.

Please see Response to Comment 71-7. The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

71-9 The comment opines that the Project would create additional parking capacity issues.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements.

71-10 The comment states an opinion that the Project would replace the view of vineyards from the adjacent trail with houses and streets, which would destroy the rural charm of the City.

The commenter is correct that the Proposed Project would remove a majority of the existing vineyard and open space that characterize the site. However, views of agricultural features in the City are not unique to the Project site such that the Proposed Project would substantially impact publicly available views. As stated on page 3.1-26 of the Draft EIR, the Project applicant is required to comply with the City's Design Review Ordinance (Chapter 17.164 of the City's Zoning Ordinance) and undergo design review to ensure the proposed development is visually consistent and compatible with the applicable General Plan and with adjacent areas as well as the existing environment. The comment is noted and forwarded to the decision makers for their consideration.

71-11 The comment suggests that the City should explore other alternatives for affordable housing.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

71-12 The comment questions the financial stability of the applicant to complete the Project and is concerned what would happen if only a portion of the Project was constructed.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The finances and economic viability of a project are not within the scope of CEQA and not subject to analysis in an EIR. The commenter's concern is noted and forwarded to the decision makers for their consideration.

71-13 The comment states opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 72

November 4th, 2021 Response to Hunter DEIR

My name is Sandra Lowry. I have lived on Starr Avenue since 1997. My husband and I moved to St. Helena from the Peninsula to get away from crowded neighborhoods, constant traffic, packed freeways and noise from SFO and two freeways. So we came to St. Helena; a decision we have never regretted. Our past experience taught us how big development can transform neighborhoods and towns, but not in a good way.

St. Helena is once again threatened by the possible approval of a flawed plan: I am speaking, of course, about the Proposed Hunter Development.

There is a callousness in the DEIR that I have never before seen: i.e., in case of flooding, residents can go to the second story of their homes. Really? Let's talk about the street I live on: Starr Ave. I believe I can speak plainly about the subject.

72-1

Please see Section 3:14.2 Roadway System: "Starr Avenue is a two-lane, undivided/mixed use street oriented north-south within the study area....."parking is available along most sections of the road." I disagree. Actually, Starr Avenue is parked up every afternoon, through the night and on weekends. Many parked vehicles (trucks, work trucks, cars) come from Hunts Grove (they need more parking onsite) and other areas, sometimes being parked for weeks unless neighbors call police. Good luck finding a parking place in front of your home on Starr. Your future residents better plan on parking at home. There is nowhere else.

72-2

And Starr Avenue has an important speeding problem; the crosswalk on the south end of Starr is a joke. There is a safety issue here. Drivers seldom stop for pedestrians and often drive around people in the middle of that crosswalk. They come speeding up Starr, headed for Pope Street and pedestrians have had narrow escapes to avoid being hit by vehicles. Last week I was pulling into my driveway in the middle of the day. Another driver was tail gating me and decided to speed up and pass instead of waiting for me to complete the turn. This is no country road, folks! I was driving at the speed limit – 25 mph. To continue:

72-3

Another quote and an important one from the DEIR: "Thresholds of Significance: Consistent with Appendix of the CEQA Guidelines, a significant impact would occur

72-4

if development of the proposed project would RESULT IN INADEQUATE EMERGENCY ACCESS."

3:14-4 "Mitigations Measures NONE REQUIRED". I disagree. Starr Avenue, one of the more popular routes in town, is already overcrowded with parked cars and traffic, and in an emergency such as fire or flood, many residents of the proposed development will decide to take Starr Avenue as their escape route. Meadow creek residents, Hunt's Grove residents, and Harvest Court residents would naturally choose Starr as their best escape route as well. Pure chaos.

72-4 Cont.

No matter which route the proposed Hunter development residents choose , they will be backed up on Hunt Ave., Starr Ave., Pope St., Adams, and Main as everyone on the East and West sides of town will be headed for the two- lane road exits out of town via the Silverado Trail and Highway 29, providing these exits are available.

72-5

According to the DEIR, exits from the proposed development, in case of emergency are Starr, Adams and a third exit that is unclear to me. Where is the location exactly? Please clarify.

72-6

If it is the levee, isn't that also the second exit for the 250 elderly people from Vineyard Valley? A problematic idea indeed. All emergency evacuation routes considered would be a driving nightmare and questionable. Picture the backup. Please clarify.

72-7

The DEIR admits there will be an increase in traffic on streets connected with the proposed project. And their Table 3:14-1 shows projections:

"Weekday Proposed Project Trips Generation"

"Proposed project estimates 798 trips daily and on Saturdays the project expects to generate 815 daily trips and 80 peak hour trips." Figure in a 24 hour period 800+ more vehicles on your streets. How do you plan to mitigate increased traffic through neighborhoods full of children and the elderly? Will there be speed bumps? (Actually, we need them now!) Traffic lights? More lighted crosswalks? (All current crosswalks should be lighted and flashing when in use). Closer

72-8

monitoring of speed limits? Is Starr Avenue intended to become a bypass? Please clarify.

72-8 Cont.

Please do not overlook these facts: The building of this project will be extremely stressful and harmful to the peace, health and quality of life for the entire East side of town, but especially to residents of Starr Avenue, Meadowcreek Circle, Harvest Court, Vineyard Valley, and Hunt's Grove. Are we being asked to endure trucks, cement mixers, etc., and breathe 6+ years of dust, debris and put up with noise from the pounding of building equipment and hammers? These would be impossible living conditions for me. Please clarify.

72-9

If this development is approved, we are selling the soul of our town and misunderstanding why St. Helena is a destination, unlike anywhere else in the country.

The document uses the term "less than significant" many times throughout. I have something to say about that: We the People who oppose this plan are not "less than significant". Our friends and neighbors are not "less than significant" - I am not "less than significant."

72-10

Thank you for your kind consideration and the opportunity to express some of my concerns. Sincerely, Sandra Lowry, 1175 Starr Avenue

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Response to Letter 72
Sandra Lowry
November 4, 2021

72-1 The comment explains the commenter's personal history and general opposition to the Project.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

72-2 The comment states an opinion that Starr Avenue is "parked up every afternoon, through the night an on weekends" and suggests that future residents of the Proposed Project would not be able to find parking along Starr Avenue.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements. .

72-3 The comment states an opinion that Starr Avenue has several safety issues including speeding, aggressive drivers, and a lack of pedestrian amenities.

As stated in Section 3.14 of the Draft EIR, Starr Avenue was analyzed in regard to vehicular collisions and overall safety along the roadway. The conclusion of the Draft EIR were that the Proposed Project would not increase hazards due to a geometric design feature or incompatible use that would contribute to an increase in collisions or create visual obstructions that would impede vehicles, bicyclists, and pedestrians from having safe access to and from the Project site. An EIR is not required to evaluate aggressive drivers.

72-4 The commenter disagrees with the Draft EIR conclusion that the Proposed Project would not result in inadequate emergency access and states that Starr Avenue is already very congested.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. For additional information regarding emergency access, please refer to Master Response 1.

72-5 The comment states that there is a lack of roadway connections to Highway 29 and Silverado Trail, and roadways would be backed up during an emergency.

The commenter's opinion regarding the lack of roadway connections to Highway 29 is noted for the decision makers. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. For additional information regarding emergency access, please refer to Master Response 1.

72-6 The commenter asks for the location of the third emergency exit stated in the Draft EIR.

As described on page 2-24 in Chapter 2, Project Description, "[e]mergency vehicle access would be provided via the extension of Adams Street, Starr Avenue, and an emergency vehicle access (EVA) to the existing gravel maintenance road that borders the north/northwest boundary of the Project site." For additional information regarding emergency access, please refer to Master Response 1.

72-7 The comment expresses the commenter's opinion regarding congestion of the levee access (maintenance) road for purposes of emergency evacuation.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. For additional information regarding emergency access, please refer to Master Response 1.

72-8 The comment addresses the Proposed Project's trip generation and its effect on roadway congestion and asks for additional mitigation measures.

Section 3.14, Transportation and Circulation of the Draft EIR analyzes all transportation impacts as mandated by CEQA. All mitigation measures and potential mitigation measure that would be needed, are discussed in detail within Section 3.14. Further, Appendix K, Transportation Impact Study, identifies several recommended roadway improvements. However, as explained on page 3.14-1 in Section 3.14, Transportation and Circulation, the CEQA Guidelines were updated (December 2018) to remove evaluation of the delay that vehicles experience at intersections and on roadway segments, which is often measured using a level of service (LOS) metric. Therefore, the operational aspects of the Proposed Project that contribute to delay and congestion on local roadways is no longer considered an environmental impact under CEQA. Therefore, the recommended roadway improvements are not identified as mitigation measures. The recommended roadway improvements are for informational purposes as to how the project could address LOS deficiencies.

72-9 The commenter expresses concern about with Project traffic and potential fugitive dust emissions associated with construction activities.

The Project would not result in exacerbating existing air quality conditions and would not result in the exceedance of the Bay Area Air Quality Management District (BAAQMD) thresholds of significance for both construction and operations. Furthermore, the BAAQMD's CEQA Guidelines contain feasible control measures to reduce fugitive dust emissions from construction activity. The measures in the CEQA Guidelines are divided into three categories: (1) basic control measures, (2)

enhanced control measures, and (3) optional control measures. The BAAQMD recommends that all construction incorporate basic control measures, regardless of the size of the site. Therefore, the Project would implement necessary precautions to reduce fugitive dust emissions such as implementing the BAAQMD's Best Management Practices (BMPs) for fugitive dust control during construction. Please see Response to Comment 72-8 regarding traffic.

72-10 The comment states opposition to the Project and the impact conclusions in the Draft EIR.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not specify where the Draft EIR is inadequate; therefore, no further response is required.

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Comment Letter 73

PUBLIC COMMNENT – HUNTER PROJECT DEIR – LEVEE FAILURE/FLOODING
FROM: Isobel Luria – 1173 Starr Avenue
DATE: November 2, 2021

The Hunter Project's DEIR in its section on Hydrology, Water and Drainage completely ignores the potentially adverse effects of Climate Change. It displays a callous and cavalier attitude when discussing the possibility of a catastrophic flood and the serious consequences that would be faced by future residents of the proposed subdivision. 73-1

The Hunter Project has been controversial from its inception and has met with much opposition. While the current city administration cannot be held responsible for the questionable decisions of its predecessors; it will be held responsible from now on. 73-2

Briefly, Dennis Hunter purchased the "raw" land for the project in 1997. In 1998, Measure A was passed. Mr. Hunter filed to start development planning in 2005. In 2008, he agreed to a lot line adjustment to facilitate the City's Flood Protection Project. In 2009, the City began work to construct a levee. "... the standard design level of protection (afforded by the levee) is for the 100-year flood event; however, the 200 year design basis was implemented to provide an additional factor of safety and to account for potential settlement..."(DEIR 3.9-8) Meanwhile in 2010, the Applicant filed for a Temporary Subdivision Map, which was accepted in March of 2011. The levee was completed in the same year. In 2012, FEMA revised its flood map, categorizing the area as a Zone X – an area protected by a levy with a moderate to low chance of flooding and an optional Flood Insurance program. It should be noted that this levee and its adjacent floodwall also protects much of East St. Helena, including Vineyard Valley Mobil Home Park, the Hunt's Grove Apartments and the Meadowcreek subdivision, all of which have sizable populations. 73-3 73-4

It is interesting that this DEIR makes no mention of any "due diligence" on its part of conducting an examination of the levee to ascertain its current condition. I can only assume the Project is leaving that up to the City of St. Helena, the entity responsible for maintaining it. Furthermore, no mention is made of any attempt by the applicant to contact FEMA to ascertain whether, again in view of Climate Change, residents will be able to obtain flood insurance and low interest flood mitigation loans, since this will be needed for new housing built in very close proximity to a **pre- existing** levee. Usually, FEMA supports areas where levees were built as a flood mitigation ie. the housing was already in place and subject to flooding! It should be noted that I could find no discussion about this on the FEMA website. 73-5 73-6

Now, as a result of Climate Change, the country is experiencing unpredictable and unprecedented weather events with increasing frequency. (We just had one – the "bomb' cyclone and accompanying atmospheric river.) FEMA is faced with an increasing burden of claims. It is not inconceivable that St. Helena could experience a catastrophic flood in the not too distant future and the levee could fail. The DEIR states that in the event of a catastrophic flood or earthquake, residents would have ample warning to evacuate. Furthermore, "flooding on the Proposed Project lots would range between 0-5 feet in depth, with the deepest flooding occurring on the northern part of the Project site. This level of flooding would leave upper floors of residences available for refuge....the risks from a 200 year 73-7 73-8

1

flood and/or levee failure are limited to property damage rather than risk of life." (DEIR 11-2) On the other hand, FEMA states that while levees reduce the risk of flooding, they don't eliminate it. They..."**deteriorate overtime and must be maintained. When levees fail, or are overtopped, the results can be catastrophic. In fact, the flood damage can be greater than if the levee had not been built." (FEMA website "Living with Levees")** I emphasize that as result of its "Zone X" classification, where flood insurance is **optional**, much of the property might not be covered.

The aftermath of this sort of catastrophic flood is awful. I disagree with the DEIR conclusion that residents would have ample time to evacuate. One can imagine that a levee failure would produce a "tidal-like" wave of debris filled water gushing through the subdivision. Unlike a regular flood where water levels rise more slowly, people would be lucky if they **reached** the second floor. Houses would be severely damaged and residents, if not injured or worse, badly traumatized. In any case, they would need to relocate, file insurance claims with FEMA, if they actually had purchased the optional insurance, possibly secure low interest FEMA loans to finance their flood repair, and, of course, find contractors, not to mention deal with their day-to-day existence – kids, school, work, and so forth. Additionally, there would be the continuing stress of wondering if claims or loans will even be granted because FEMA does its homework: they investigate every claim. In the case of this Applicant's Project, FEMA might refuse to pay for the flood damage and repair because the houses were built close to a pre-existing levee. They might argue, if they look at the time sequence, that levees should not be erected to protect future subdivisions and that locating new structures near existing levees creates a preventable and needless risk.

Should FEMA withhold its aid, the residents would probably sue the developer and the City, it being the entity who granted permission for the subdivision to be built. These lawsuits could be prohibitively expensive. This scenario would be disastrous for St. Helena. But why should the city even allow itself this level of exposure when a valid reason exits for denying the project: a reason that even the state of California must support. In reality, the city lacks the infrastructure on the East side of St. Helena to safely and expeditiously evacuate even existing residents in a catastrophic emergency. In the case of a severe flood and levee failure, roads in the Hunter Project would probably be impassable, Starr might be affected, and use of the Pope Street bridge to access the Silverado trail, questionable at best.

If the city turns down the applicant on these grounds, and there are additional reasons that are almost as compelling, the applicant will most likely sue. But this exposure is far less than the multiple suits that would derive from not only a badly damaged subdivision, but also one in which lives could have been lost: the city could be found to have been derelict in its obligation to protect its residents.

Finally, it should be noted that I am not an attorney, simply a concerned resident. I am basing my opinion on common sense and logic. It is my belief that the city should not give this applicant the green light.

73-8 Cont.

73-9

73-10

73-11

73-12

73-13

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Response to Letter 73
Isobel Luria
November 2, 2021

73-1 The comment states an opinion that the Hydrology, Water Quality, and Drainage section of the Draft EIR ignores the potentially adverse effects of climate change and dismisses the consequences of a catastrophic flood.

Please see Response to Comment 31-1.

73-2 The comment states the commenter's personal observation that the Proposed Project has been controversial and that the current City administration will be held responsible for their decisions.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

73-3 The comment explains the commenter's understanding of the history of acquisition of the Project site and construction of the levee.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 that provides information specific to the levee.

73-4 The comment states that the levee and adjacent floodwall protects much of the eastern side of the City.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 that provides information specific to the levee.

73-5 The comment states an opinion that the Draft EIR does not include a due diligence examination of the current condition of the levee.

The Project does not have an impact on the levee's effectiveness or on flood hazards for surrounding communities, either directly or indirectly. California Supreme Court's decision in *California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369* held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents" but they must analyze hazards the project

might risk exacerbating. Accordingly, comments regarding the levee, that will not be directly or indirectly impacted the Project, are outside the scope of CEQA review for this Project.

73-6 The comment asserts that the Draft EIR does not mention any contact to FEMA to ascertain whether residents will be able to obtain flood insurance and low interest flood mitigation loans.

As stated on page 3.9-8 of the Draft EIR, because the Project site is outside of a FEMA Special Flood Hazard Area (SFHA), no flood insurance would be required. However, because there remains residual risk of flooding from catastrophically large floods (such as a 500-year flood) or levee failures, residents in flood-prone areas, even if outside of a regulatory flood zone, have the option to purchase optional flood insurance. Additionally, please see Master Response 3 for more information about flood insurance.

73-7 The comment states an opinion that the country is experiencing more frequent extreme weather events resulting in a burden of claims to FEMA.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, please see Master Response 3 for information about the role of FEMA.

73-8 The comment references a statement from FEMA which states that levees deteriorate over time and if failure or overtopping occurs, flood damage can be greater than if the levee had not been built. The comment goes on to suggest that since flood insurance is optional, the Project would not be fully insured against flood damage.

Please see Response to Comment 73-5 and also Master Response 3 regarding the levee and the need for flood insurance.

73-9 The comment disagrees with the Draft EIR conclusion that Project residents would have ample time to evacuate in the event of a flood. The comment also states that FEMA may refuse to pay for flood damage and repair because the Project was built close to an existing levee.

Please see Response to Comment 73-5. However, the Draft EIR states on page 3.9-12 that in the unlikely situation the levee is overtopped, Project residents would have ample warning to evacuate prior to flooding. The same existing measures implemented to respond to flood emergencies within the region would continue to be used and would serve to provide residents with the means to avoid personal harm in the event of a catastrophic flood. This includes flood watches, advisories, and warnings from the National Weather Service, reporting by local news outlets, announcements and communications via Integrated Public Alert and Warning System, text alerts, and other means of communication that would be increasingly

used in the event of a severe flood threat. Please see Master Response 3 for more information regarding flood protection and potential for levee failure.

73-10 The comment states an opinion that if FEMA withholds aid in the event of a flood event, Project residents would likely sue the Project applicant and the City.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Master Response 3 for more information regarding flood protection and the potential for levee failure.

73-11 The comment opines that the east side of the City lacks the infrastructure to evacuate residents in the event of an emergency.

Please refer to Master Response 1 regarding emergency evacuation plans.

73-12 The comment states an opinion that a lawsuit from the Project applicant in the event the City rejects the Project would cause less bad publicity than if the City were to be sued by residents.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

73-13 The comment states the commenter's opinion that the City should not approve the Proposed Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 74

HUNTER PROJECT – COMMENTS ON DEIR (11/3/21)
Isobel Luria – 1173 Starr Avenue

With the effects of "climate change" becoming more and more severe, the Hunter Project couldn't have come up at a worse time. The fires of 2017 and 2020 have made people all too aware that our lovely city, as well much of the Napa Valley, can suddenly turn into an inferno. Furthermore, the residents of Saint Helena are struggling with the effects of one of the most severe droughts on record. Additionally, while things are really dry now, at some point in the future, we will experience some really wet winters with even more severe storms and the Napa River will flood. If in the past, the "100 year" flood was the marker to which all floods were compared, we should accept the fact that a "200 year" flood is not unimaginable and prepare for such an event. It is in the light of this new reality that the Hunter Project DEIR should be scrutinized by our community. 74-1

The DEIR relies on vague, untested figures that when examined often seem ludicrous. While it is useful to quantify data, the methods employed must be able to withstand examination. It is difficult to comprehend why St. Helena is in such a hurry to approve this project. I do not have the technical expertise to comment on all the possible health and safety issues that could potentially arise because of this project, but this DEIR underestimates the Project's many negative impacts and offers few ways to mitigate them. I would simply urge the city to do its own due diligence and question the conclusions reached in this DEIR. 74-2

TRAFFIC AND CIRCULATION

The DEIR allows that there will be increased traffic caused by the additional cars the new residents of the HP will use. After a lengthy discussion of the local roadways, a description of the proposed extension of Starr Avenue and Adams Street, a rather low estimate of the number of cars that new residents will bring into our city, and a forecast of where the worst areas of congestion might be, the Report admits that, yes, there will be increased traffic as a result of this subdivision and that there is really no way to mitigate the effects this will have. 74-3

The DEIR arrives at an estimate of the number of individuals, who will live in the subdivision, and the number of cars they will use. It is always difficult to accurately predict the size of a new population and it is in the interest of developers to underestimate this to some extent. The DEIR fails to take into consideration of what happens to families as time goes by: they can increase in size: baby by baby. When children reach a certain age, especially in a valley such as ours, they want and need cars and parking. Those of us who live in the Meadowcreek subdivision are well aware of this phenomenon: parking in our neighborhood, especially overnight and early in the morning, can be so dense that there is barely room to put out garbage bins on collection day. This congestion is partly the result of inadequate parking at the Hunt Grove apartments located at the east end of Hunt Street. In planning for new subdivision, additional land must be set aside to satisfy future parking needs, especially in the area that contains the Affordable Housing units. 74-4 74-5

1

SAFETY

The proposed subdivision will necessitate a four-way intersection where Starr Avenue and Hunt Street meet. This is already a very dangerous intersection as cars going south on Hunt often fail to come to a full STOP before turning right on Starr. There are already a fair number of children in this neighborhood and residents have experienced some "close calls." The addition of more cars and more people exacerbate the potential for accidents. I disagree with the DEIR when they fail to even try to suggest a "mitigation." Clearly, one comes to my mind: don't permit the Applicant to build the subdivision in this location. 74-6

EMERGENCY EVACUATION

In the event of an emergency evacuation, it is clear from the location of the proposed subdivision that most vehicles will access Starr Avenue to reach Pope Street and thereby head either north or south as the situation dictates via either the Silverado Trail (hereafter called the Trail) or 29. Granted there is the possibility of following a circuitous route by driving west on Adams but that would not be the route of choice. In addition, the narrow Pope Street bridge is a very poor structure to handle evacuations. In the last two fires, the northern exits from the valley were blocked by the fire and everyone had to exit to the south. Last week, as a result, of the recent heavy rains a portion of the Silverado Trail had to be shut down. 74-7

I question why the City of St. Helena would consider granting approval of a new subdivision in the area described in the DEIR until the infrastructure has been improved and a reliable evacuation route created. The safety of the residents is at stake and even the State of California cannot question that. 74-8

WATER

In its analysis of Hydrology and Water Quality, (see DEIR 3.9-40 – 3.9-43) I believe that the DEIR reaches faulty conclusions about the HP's impact on ground water in the area by relying on vague or untested figures. In addition, it bases conclusions on weather history without taking into consideration the probability that, because of Climate Change, we will experience weather of record-breaking severity. The report makes statements like the following (DEIR section 3.9-10) "The Subbasin was found to exhibit stable groundwater levels, even despite a very dry 2020 water year...The long-term (1988-2020) annual change in storage for the subbasin is a decrease of 8,0945 AF following the very dry conditions of 2020 but still with water ranges generally experienced over the long term. " 74-9

The DEIR goes on to discuss (see Table 3.13-9) that the proposed landscaping for the subdivision, its outdoor water needs, will be "water neutral" because of a currently inoperable well on the property. This well has been tested and shown produce 350 GPM. The DEIR states that this output is adequate to supply the subdivision, which is projected to require 17.16 acre feet per year. Again, this figure is a questionable as the DEIR states that 185 trees are going to be planted and that there will be drought tolerant plantings between the trees. Young trees and plants need ample water to establish themselves. Furthermore, no allowance is made for the landscaping homeowners will plant in their private gardens. 74-10

2

The DEIR assumes that the annual draw down of water by the subdivision will not have much impact on the subbasin because future rainfall will recharge it. Unfortunately for the Hunter Project, St. Helena is experiencing the effects of a "mega drought" and has instituted Stage II water use restrictions." Furthermore, much of the area in the proposed subdivision will be covered by hardscape and buildings thus eliminating a big percentage of land currently available for direct recharging of ground water. While it is true that in very wet years ample run off from the hardscape will find its way into the storm drainage system, this is not the case in dry years. I disagree with the DEIR's conclusion that the construction of this development will not have a negative impact on ground water supplies. I doubt, given the reality of Climate Change, that its need for well water will not exceed the annual 0.9% it projects. (DEIR section 3.9.48)

74-11

The report, in its discussion on water (DEIR section 3.13-24.-.3.13-33), also underestimates the quantity of indoor water that future residents of the subdivision will purchase from the City of St. Helena: 17,752 gallons per day or 19.88 acre-feet per year. The figures on which the DEIR bases its conclusions are found in Table 3.13.10. While I understand that some "guesstimates" must be used for discussion purposes, these figures seem low and some sort of tests should be run to determine how to accurately measure water usage by individuals. For example, the DEIR states that the residents of the new subdivision will flush toilets 3 times per person per day. **Really?** Another understated usage concerns the future kitchen faucets. It is projected that each resident will briefly use this faucet 1 time daily. It would seem these people will neither drink nor prepare meals. But the biggest fallacy in logic is yet to come. To support its contention that the Hunter Project will achieve a Water Neutral status (a requirement of all new construction called for by the St. Helena 2019 General Plan EIR), the developers will be required to retrofit a certain percentage of existing homes and businesses with water saving devices. I assume that the water saved by this retrofitting is supposed to compensate for a portion of the future consumption of in-house water by the subdivision. Many homes and businesses in St. Helena have already had this sort of retrofit. Secondly, and more importantly, water usage in town has already been drastically reduced owing to stringent conservation regulations in place and backed up by penalties. Considering the conservation already taking place, it is difficult to imagine that retrofitting several hundred houses will result in much additional water being saved. Alternately, the developer offers to pay a fee to the city in lieu of the retrofit. In actuality, the HP will not be water-neutral, and the city lacks a stable enough water supply to allow this project to be built.

74-12

74-13

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Response to Letter 74
Isobel Luria

74-1 The comment states an opinion that due to climate change and extreme weather events, including a flood event, development of the Proposed Project is not recommended.

The comment does not address the adequacy of the Draft EIR, but instead expresses the commentor's opinion about the Project. The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. However, please see also Master Response 3 regarding the protection provided by the Napa River levee in the event of a flood.

74-2 The comment states an opinion that the Draft EIR relies on untested data and underestimates the Project's potential impacts without providing adequate mitigation.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. However, the analysis in the Draft EIR relies on technical studies prepared for the Project as well as other substantial evidence required to determine any potential Project impacts. The comment is noted and forwarded to the decision makers for their consideration.

74-3 The commenter is concerned about traffic congestion increasing as a result of the Proposed Project.

The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. The analysis includes consideration of motorized vehicle traffic impacts on roadway capacity, vehicle-miles traveled (VMT), and potential impacts to transit, bicycle, and pedestrians. The comment does not identify any specific areas where the Draft EIR or analysis is inadequate; therefore, no further response is required. Please see also Response to Comment 36-2.

74-4 The comment states an opinion the Project's trip generation is inaccurate.

Trip generation estimates for the Project were provided in Section 3.14 of the Draft EIR. Estimates were calculated based upon trip rates provided in the Institute of Transportation Engineers' (ITE) Trip Generation, 10th Edition. In September 2021 the 11th Edition of the ITE manual was released. It does not change the Project's trip rates derived from the 10th Edition. Average trip generation rates represent weighted averages from studies conducted throughout the United States and Canada since 1980 that surveyed the identified use. Single-Family and multi-family land uses are based on surveys and weighted averages. Rates are not based on a specified

number of bedrooms or vehicles per household. The rates provided in the Draft EIR are based on accepted industry standards for this type of project.

74-5 The comment expresses the commenter's concern about lack of parking availability in the neighborhood.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements.

74-6 The comment expresses the commenter's concern regarding the effect the Proposed Project would have on pedestrian safety and vehicular collisions at the intersection of Starr Avenue and Hunt Avenue.

As stated in Section 3.14 of the Draft EIR, Starr Avenue and Hunt Avenue were analyzed in regard to vehicular collisions and overall safety along both roadways. The conclusion of the Draft EIR was that the Proposed Project would not increase hazards due to a geometric design feature or incompatible use that would contribute to an increase in collisions or create visual obstructions that would impede vehicles, bicyclists, and pedestrians from having safe access to and from the Project site. Additionally, vehicular collisions within the City were also analyzed within Section 3.14 of the Draft EIR and Project impacts were concluded to be less than significant. Therefore, no mitigation measures would be required.

74-7 The comment states the commenter's opposition to the Project and the effect on emergency access routes and evacuation in case of emergencies.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Section 3.14 of the Draft EIR analyzed emergency vehicle access in detail. For additional information regarding emergency vehicle access and evacuation, please see Master Response 1.

74-8 The commenter q asks why the City would approve the Project prior to improving the existing infrastructure and a reliable evacuation route is created.

Please see Master Response 1 regarding emergency evacuation.

74-9 The comment opines that the Hydrology and Water Quality section of the EIR is based on vague and untested information and does not consider extreme weather conditions caused by climate change. The commenter quotes a statement from page 3.9-10 of the EIR regarding groundwater levels.

Please see Response to Comments 14-9 through 14-17 and Master Response 2, regarding water supply.

74-10 The comment states an opinion outdoor water needs are not accurately portrayed in Table 3.13-9 of the Draft EIR because new trees and plants require a significant amount of water to get established, and homeowners will also require water for landscape irrigation.

Please see Responses to Comments14-9 through 14-17 and Master Response 2.

74-11 The comment states that the Draft EIR's conclusion on page 3.9-48 is inaccurate because climate change will likely cause the need for groundwater to exceed the projected figure of 0.9%.

Please see Responses to Comments 14-9 through 14-17 and Master Response 2.

74-12 The comment states an opinion that the discussion on pages 3.13-24 through 3.13-33 of the Draft EIR underestimates the quantity of indoor water that the Project will require and "tests" should be run to determine how to accurately measure water usage by Project residents.

Please see Responses to Comments14-9 through 14-17 and Master Response 2.

74-13 The comment states an opinion that retrofitting houses will not save enough water for the Project to be considered water neutral.

Please see Responses to Comments14-9 through 14-17 and Master Response 2.

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Comment Letter 75

From: Isobel luria <isobel.luria@gmail.com>
Sent: Monday, November 8, 2021 1:00 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Levee Maintenance

Hi Maya,

Still working away on the Hunter DEIR. Could I please get copies of the Levee Maintenance records. I haven't found them in any of the appendices. Thanks so much. 75-1

If the Planning Department doesn't have them, perhaps you could tell me whom I should contact.

Thanks so much.

Isobel
--
Isobel Luria
Isobel.luria@gmail.com
Mobile: 707-480-3983
Sent from my iPad

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Response to Letter 75
Isobel Luria
November 8, 2021

75-1 The commenter requests copies of the City's levee maintenance records.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The City posts levee maintenance records available to the public on the City's website here: https://www.cityofsthelena.org/publicworks/page/flood-control-and-river-restoration-project

Please refer to Master Response 3 for additional information specific to the levee.

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Comment Letter 76

HUNTER PROJECT – REVISED COMMENTS AND QUESTIONS ON DEIR (11/30/21)
Isobel Luria – 1173 Starr Avenue

With the effects of "climate change" becoming more and more severe, this is an inopportune time to consider approving the Hunter Project. The fires of 2017 and 2020 have made people all too aware that our lovely city, as well much of the Napa Valley, can suddenly turn into an inferno. Furthermore, the residents of Saint Helena are struggling with the effects of one of the most severe droughts on record. Additionally, while things are really dry now, in the future, we will experience some really wet winters with even more severe storms and the Napa River will flood. If in the past, the "100 year" flood was the marker to which all floods were compared, we should accept the fact that a "200 year" flood is not unimaginable and prepare for such an event. It is in the light of this new reality that the Hunter Project DEIR should be scrutinized by our community. 76-1

The DEIR relies on vague, untested figures that when examined often seem ludicrous. While it is useful to quantify data, the methods employed must be able to withstand examination. This is a very disappointing report that cavalierly dismisses impacts as insignificant when a mitigation is needed. 76-2

TRAFFIC AND CIRCULATION: PARKING

After describing local roadways including the proposed extension of Starr Avenue and Adams Street, discussing how to measure traffic impacts (DEIR 3.14-39) using Vehicle Miles Travelled (VMT), and identifying areas of future congestion, the DEIR concludes that, while the vehicles used by future residents of the Hunter Project will increase traffic, there is really no way to mitigate this situation. Even though the Project has good access to shopping, even though there will be bike routes and sidewalks, people living in a place like St. Helena tend to drive. 76-3

The DEIR estimates that 213 individuals will live in the subdivision. This number is based on the figure of 2.45 people per unit, which is the basis the City relies on for medium/high density zoning. Some people will own several cars. It is always difficult to accurately predict the size of a new population and it is in the interest of developers to underestimate this to some extent. The DEIR fails to take into consideration what happens to families as time goes by: they tend to increase in size, baby by baby. When children reach a certain age, especially in a valley such as ours, they want and need cars and parking. **While the number of parking spaces and garages described in the DEIR may be sufficient at first, it will not accommodate future needs.** Those of us who live in the neighboring Meadowcreek subdivision are well aware of this phenomenon. Parking in our neighborhood, especially overnight and early in the morning, can be so dense that there is barely room to put out garbage bins on collection day. This congestion is partly the result of inadequate parking at the Hunt Grove apartments located at the east end of Hunt Street. 76-4

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Isobel Luria cont'd

Question 1. What can the Applicant do to insure that the new subdivision doesn't exacerbate in the future the parking problem we already have in our neighborhood? 76-5

TRAFFIC AND CIRCULATION: SAFETY

The proposed subdivision will necessitate a four-way intersection where Starr Avenue and Hunt Street meet. (DEIR 3.14-47). Currently, this is a somewhat hazardous intersection for residents of the neighborhood, particularly children, and a fair number of people have experienced "close calls." Additionally, the DEIR notes that an extended Starr to an extended Adams could be used by drivers as an alternate route bypassing Main Street. This will not only increase traffic at this location but also the potential for accidents. 76-6 76-7

Question 2. What could be done to mitigate this impact?

EMERGENCY EVACUATION

The DEIR doesn't address the fact that there is not an efficient means for evacuating the residents of St. Helena in an emergency even though adding more population impacts this situation. It is clear from the location of the proposed subdivision that most vehicles will travel south on Starr Avenue to reach Pope Street and then head north or south as the situation dictates via either the Silverado Trail or Route 29. Granted there is the possibility of following a circuitous route by driving west on Adams but that would not be the route of choice. The narrow Pope Street bridge is a very poor structure to handle evacuations. In the last two fires, the northern exits from the valley were blocked by fires and everyone had to exit to the south. Last week, as a result of the recent heavy rains, a portion of the Silverado Trail had to be shut down. I question why the City of St. Helena would consider granting approval to a new subdivision in the area described in the DEIR until infrastructure has been updated to allow for a more efficient evacuation. 76-8

Question 3. What can be done to improve the Emergency Evacuation Routes out of St. Helena?

WILDLAND FIRE HAZARDS

An example of the callous attitude found in this DEIR occurs in its brief discussion and dismissal of Wildland Fire Hazards. (DEIR 3.8-5) While speaking about the September 2020 Glass Fire the statement is made that "The hills visible from the Project site experienced fire damage." It makes no mention of the fact that part of the area where the subdivision will be constructed, also burned in that fire. The fact that the Project site is in a Non Very High fire Hazard Safety Zone did not seem to protect it! 76-9

-2-

Isobel Luria cont'd

Question 4. What mitigations are planned to protect the Project area from the dangers of Wildfires? 76-9 Cont.

HYDROLOGY AND WATER QUALITY

In its analysis of Hydrology and Water Quality, (see DEIR 3.9-40 – 3.9-43) the DEIR reaches faulty conclusions about the Hunter Project's impact on ground water in the area. In addition, it bases conclusions on weather history without taking into consideration the probability that, because of Climate Change, we will experience weather of record-breaking severity. The report makes statements like the following (DEIR section 3.9-10) "The Subbasin was found to exhibit stable groundwater levels, even despite a very dry 2020 water year...The long-term (1988-2020) annual change in storage for the subbasin is a decrease of 8,0945 AF following the very dry conditions of 2020 but still with water ranges generally experienced over the long term. " 76-10

The DEIR goes on to discuss (see Table 3.13-9) that the proposed landscaping for the subdivision, its **outdoor water needs**, will be "water neutral" because of a currently inoperable well on the property. The well was tested for one 24 hour period and produced 350 GPM. The DEIR states that this output is adequate to supply the landscaping water requirements for the subdivision, which is projected to use 17.16 acre feet per year, without noticeably affecting levels in the Napa River because it will draw water from deep in the aquifer. I take exception to this statement as the Applicant expects to plant 185 trees with drought tolerant plantings between the them. Young trees and plants need ample water to establish themselves. Furthermore, **no allowance is made for the outdoor water needs of the 51 privately owned lots.** The applicant assumes that future rainfall will recharge the subbasin as it has in the past when the area served as a vineyard. Unfortunately, St. Helena is experiencing the effects of a "megadrought" of unknown duration. In addition, much of the proposed subdivision will be covered by buildings and "hardscape" thus eliminating a large percentage of land currently available for direct recharging of ground water. I question the DEIR's conclusion that the irrigation of this development will not have a negative impact on the local subbasin. 76-11

To assume, based on one 24 hour well test, that a subdivision the size of the Hunter Project will be "water neutral" as far as its landscape needs are concerned is questionable. To go even further and state that the project's irrigation will have no impact on the Subbasin or nearby Napa River without further testing is unconscionable. 76-12

Question 5. From what source will the landscaping on the privately owned lots be irrigated and how much additional water will that require? 76-13

Question 6. What additional testing should be required of the Applicant to determine more accurately the actual impact on the ground water subbasin that the well on the Project will draw from. 76-14

The report, in its discussion on water (DEIR section 3.13-24.-.3.13-33), also underestimates the quantity of **indoor water** future residents of the subdivision will purchase from the City of St. Helena: 17,752 gallons per day or 19.88 acre-feet per year. The figures on which the DEIR 76-15

-3- 76-16

Isobel Luria cont'd

bases its conclusions are found in Table 3.13.10. (**Again I point out that these figures do not include any water allowance for private yards.**)While I understand that some "guesstimates" must be used for discussion purposes, these figures seem low and some sort of tests should be run to determine how to accurately measure water usage by individuals. For example, the DEIR states that the residents of the new subdivision will flush toilets 3 times per person per day. Another understated usage concerns the future kitchen faucets. It is projected that each resident will briefly use this faucet 1 time daily. It would seem these people will neither drink nor prepare meals. But the biggest fallacy in logic is yet to come. To support its contention that the Hunter Project will achieve a Water Neutral status (a requirement of all new construction called for by the St. Helena 2019 General Plan EIR), the developers will be required to retrofit a certain percentage of existing homes and businesses with water saving devices. I assume that the water saved by this retrofitting is supposed to compensate for a portion of the future consumption of in-house water by the subdivision. Many homes and businesses in St. Helena have already had this sort of retrofit. Secondly, and more importantly, water usage in town has already been drastically reduced owing to stringent conservation regulations in place and backed up by penalties. Considering the conservation already taking place, it is difficult to imagine that retrofitting several hundred houses will result in much additional water being saved. Alternately, the developer offers to pay a fee to the city in lieu of the retrofit. How will paying a fee render the subdivision "water neutral?"

76-16 Cont.

76-17

Question 7. What is a better method to determine how much indoor water will actually be consumed by future residents?

76-18

Question 8. Once a reasonable projection is made, how will that level of usage impact the city and its residents, who are already under Stage II water restrictions?

76-19

Response to Letter 76
Isobel Luria

76-1 The comment states an opinion the Project should not be approved due to the existing drought and potential for increased flooding as a result of climate change.

The comment does not raise does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 for information regarding climate change and the status of the Napa River levee.

76-2 The comment states an opinion that the Draft EIR relies on vague and untested data that dismisses Project impacts and the need for mitigation.

The comment does not raise does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. The comment is noted and forwarded to the decision makers for their consideration.

76-3 The comment states an opinion the Project's trip generation estimates are inaccurate and underestimated because families increase in size the number of cars can increase.

Please see Response to Comment 74-4.

76-4 The comment states an opinion that parking in the neighborhood is over capacity.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements. .

76-5 The comment asks what the Proposed Project would do to lessen parking capacity concerns.

Please see Response to Comment 76-4.

76-6 The comment expresses the commenter's concern about the safety of the Starr Avenue and Hunt Avenue intersection.

Please see Response to Comment 59-3.

76-7 The comment states an opinion that an extension of Starr Avenue to Adams Street could increase traffic and the potential for accidents and asks what can be done to mitigate this impact.

Please see Response to Comment 59-3.

76-8 The comment states an opinion that the Draft EIR does not consider that the City does not have efficient means for emergency evacuation, which would be further impacted by the Project and asks what can be done to improve emergency evacuation.

Section 3.14 of the Draft EIR analyzed emergency vehicle access in detail. For additional information regarding emergency vehicle access and evacuation, please see Master Response 1.

76-9 The comment states an opinion that the Draft EIR fails to note that a part of the Project site was burned in the September 2020 Glass Fire. The commenter asks what mitigation measures are planned to protect the Project area from wildfires.

The Draft EIR notes on page 3.8-5 that the hills visible from the Project site experienced fire damage. The Project site did not experience any fire damage from the 2020 Glass Fire. The discussion under Impact 3.8-4 on page 3.8- 21 describes how best management practices, BAAQMD regulations, and properly irrigated landscapes would reduce fire risk.

76-10 The comment states an opinion that the Hydrology and Water Quality analysis reaches faulty conclusions about the Project's impact on groundwater because it does not consider the effects of climate change.

Please see Response to Comments 35-4 through 35-6.

76-11 The comment states an opinion that outdoor water needs are not accurately portrayed in Table 3.13-9 of the Draft EIR because new trees and plants require significant amounts of water to get established and landscape irrigation for the new homes is not included.

Please see Responses to Comments14-9 through 14-17 and Master Response 2.

76-12 The comment states an opinion that because the City is experiencing a severe drought and the Project would increase impervious surface area, there may be a negative impact on the local groundwater subbasin.

Please see Master Response 2 and Responses to Comments 35-4 through 35-6.

76-13 The comment suggests that the Draft EIR should not assume the Project would be water neutral based on one 24-hour well test. The comment also states an opinion

that it is not reasonable to conclude that Project's irrigation would have no impact on the groundwater subbasin or Napa River without further testing.

Please see Responses to Comments 14-9 through 14-17, 57-5 and Master Response 2.

76-14 The commenter asks how much additional water would be required to irrigate privately owned lots and where the water will come from.

Please see Response to Comments 14-9 through 14-17 and Master Response 2.

76-15 The commenter asks what additional testing should be required of the Project applicant to determine a more accurate impact on the groundwater subbasin.

Please see Responses to Comments 35-4 through 35-6, 57-5 and Master Response 2.

76-16 The comment states an opinion the discussion on pages 3.13-24 through 3.13-33 of the Draft EIR underestimates the quantity of indoor water that future residents of the Project will use, including landscape irrigation. The comment goes on to state that tests should be done to determine how to accurately measure water usage by individuals.

Please see Responses to Comments 14-9 through 14-17 and Master Response 2.

76-17 The comment states an opinion that retrofitting houses will not save enough water for the Project to be considered water neutral. The commenter asks how the in-lieu fee would satisfy the water neutral condition.

Please see Responses to Comments 14-9 through 14-17 and Master Response 2.

76-18 The commenter asks if there is a better method to determine the indoor water usage of future residents.

Please see Responses to Comments 14-9 through 14-17 and Master Response 2.

76-19 The commenter asks how the Project's water demand would impact the City and its residents.

Please see Responses to Comments 14-9 through 14-17 and Master Response 2.

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Comment Letter 77

To: Maya DeRosa, St Helena City Planner November 7, 2021

Re: Hunter Project -- Citizen Comments

Dear Ms. DeRosa,

We have been St Helena residents for nearly 50 years now and have watched things happen that could never be predicted back those oh so many years ago. This proposed Hunter housing project is just one of those potential events that if approved will someday be looked back upon as "How could they have ever let something like that be built where it is?" 77-1

The Vineyard Valley Mobile Home Park is obviously sited in a location where homes or mobile homes should never have been allowed. The occurrence of two 100 Year Floods in that park within nine years of one another attest to the allowance of a project that would flood and cause such unfathomable harm and devastation.

Looking back to those early 1970s, fear of flooding was a valid concern. That low lying property adjacent to the Napa River and Sulphur Creek had been know to be under water many times in recorded history. Only because of the evolving engineering talent of that time and the presumed wisdom of those who can make such decisions, was the VVMHP allowed to be built. Yes, it was built in a flood plain, but Federal Flood Insurance was available to residents should something go wrong and the park go under in a flood. That one band-aid alone was deemed to be acceptable should a flood occur.

It was only because of the modern-day engineering talent of that time that a Flood Wall (I.e. heavy duty wooden fence) was designed and approved as a deterrent to the possibility of flooding to the park. The northern (actually western) edge of the park was required to have a dirt berm (levee) of about 24 inches above grade, and placed into that dirt levee were 4x6 wooden posts upon which the approximately 4x12 lateral boards were placed to become this "Flood Wall" that was supposed to keep a wall (actually a lake) of water from inundating the mobile homes on the inside of the park. Looking back, it seems preposterous that such a scheme could be created let alone approved for such a foreboding potential flood. But approved it was. 77-2

In 1986, at the time of the first 100 Year Flood at that location, I was on scene with other volunteers assisting the California Division of Forestry (precursor to Cal Fire) crew members as we filled sandbags and dropped them over the Flood Wall to rest on the opposite side of the so-called levee, two feet below the water level. It became obvious very soon that there was a very serious problem that had never been included into the original engineering plan for this levee and Flood Wall. This oversight was the failure to understand that gophers, moles and voles would permeate this dirt levee, and as the pressure from the flood waters on the other side began to penetrate their subterranean runs, those channels would burst through to our side of the levee and get larger and larger as they rapidly eroded. We even tried to sandbag "our side" of that Wall/levee, but that did not work. Soon the mobile home park streets were filling with water and our efforts shifted to evacuating the hundreds of older residents of VVMHP. The Water Wall had failed, and the park was submerged.

Once the flood waters had subsided and the flooded mobile homes were being removed and replaced with new ones, a solution to any possible future flooding had to be designed. Engineers immediately removed the berm/levee concept from the newly designed flood barrier. The new Flood Wall was to be a cinder block wall with cinder block support posts. The wall was to be higher than

before, and subject to FEMA and National Flood Insurance requirements. Once those requirements were determined as adequate for any future possibility of a similar or even larger flood, the owner of the VVMHP insisted upon paying for the height to be even one cinder block higher than engineers required as an added safety measure. And so, it was to be. Another cinder block was added to the height.

It seemed to be a win-win situation for most everyone. There were not only updated engineering regulations being adhered to, but the project was so convincing that many of the insurance companies who had paid millions of dollars to care for their VVMHP customers were even willing to continue insuring them as well as accepting new applicants.

And now we come to 1995 when yet another 100 Year Flood arose and put the newly designed and engineered Flood Wall to the test – a "test" that failed.

With flood waters having destroyed both of the prior "engineering marvels" designed to protect Vineyard Valley, a more grandiose project had to be created. Hence the multi-million-dollar flood control project currently in place with a levee to supposedly protect the VVMHP and adjacent homes.

History reveals the eternal battle between technology and nature, especially where levees are concerned. While the 2005 drama of Hurricane Katrina in New Orleans and the collapse of earthen and concrete levees that were engineered to protect that area are still fresh in our minds, each year more and more levees of lesser fame have failed with catastrophic results as well.

Simply speaking, we (St Helena) cannot be lulled into complacency to think that our levee between the eastern end of Adams Street and the Napa River can be relied upon to protect property behind it. As such, it is folly to rely upon this levee to protect the proposed Hunter Project in the future. While there are many obvious reasons why levees fail, one of those causes is unwanted vegetation being allowed to grow upon or alongside a levee. Our St Helena levee is a good example of just such a problem with the large area of Coyote Brush that has been allowed to take root there.

Just as we were not able to rely upon the two prior flood control measures mentioned earlier, it is only logical and reasonable that we cannot rest assured that this new engineering creation of a levee will preclude yet another failure and subsequent damage to something like the Hunter Project.

While there is no justification for ignoring the inevitability of levee failure, there is only one of two solutions to this proposal. The first is to deny this project based upon the potential for failure, and the second would be to approve the project subject to the applicant assuming full responsibility and liability in the event of a levee breach or any other such inundation of that project area.

77-2 Cont.

77-3

77-4

77-5

Sincerely,

Norm Manzer
103 Camino Vista
St Helena, CA 94574

Response to Letter 77
Norm Manzer
November 7, 2021

77-1 The commenter provides their history as City residents and states opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

77-2 The comment provides their history of previous flood events in the City, particularly at the Vineyard Valley Mobile Home Park. The comment also describes their understanding of several previous engineering projects to control and manage flooding in the Project area.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 that addresses flooding concerns.

77-3 The comment provides a general statement about flood events and levee failure and provides Hurricane Katrina as an example.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 that addresses flooding concerns.

77-4 The comment states an opinion that the Napa River levee should not be relied on to protect Project residents and references previous flood events discussed in Comment 77-2.

Please see Response to Comment 73-5. Please also see Master Response 3 addresses issues associated with flooding and the levee.

77-5 The comment state opposition to the Project and requests the City not approve the Project based on the potential for levee failure and requests that the Project applicant be liable for potential levee failure should the Project be approved.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Response to Comment 73-5 and Master Response 3 that addresses concerns specific to the levee.

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Comment Letter 78

-----Original Message-----
From: marks.marybeth@gmail.com <marks.marybeth@gmail.com>
Sent: Saturday, October 30, 2021 6:30 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision Project

Hi Maya

I am writing to let you know that my husband and I are very much against the proposed Hunter subdivision going forward. 78-1

We plan on joining the meeting on Nov 2nd to learn more as we're certain there have been impact studies completed. 78-2

This high density housing will go towards accelerating the depletion of our already overtaxed resources, especially our water. 78-3

Thank you,

Beth and David Marks
945 Brown St
St Helena CA 94574

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Response to Letter 78
Beth and David Marks
October 30, 2021

78-1 The comment states opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

78-2 The comment states that it is the commenters' plan to attend future Project hearings.

The comment does not identify any specific areas where the EIR or analysis is inadequate. Therefore, no response is required; the comment is noted and forwarded to the decision-makers for their consideration.

78-3 The comment states an opinion that "high density housing" (the commenter's term) will further impact limited resources, including water.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. To clarify, the Project is proposing residential development consistent with the "medium density" designation of the St Helena General Plan. Please see also Master Response 2 regarding water supply.

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Comment Letter 79

From: Tracy McBride, email: tracymcbride22@gmail.com
To: City Planners/Staff

Subject: Hunter Project Draft EIR is Inadequate and Incomplete

11/28/21

I support more housing, more diversity in St. Helena, and property owner rights. But I strongly feel the proposal for 87 units DEIR is significantly lacking in information and proposes inaccurate information. 79-1

The question is, why does no one in town support this project? Or alternatively, why isn't the project so compelling, that it generates support? 79-2

Notably:

1. **SAFETY & Circulation**: The circulation via Starr Ave, Adams, to the Silverado Trail must be addressed. It is critical the Adams eastern entrance to St Helena is now planned and budgeted. Even without the Hunter project, the Adams St extension needs to connect to the Silverado Trail. We are at a tipping point: build the bridge. Pope and Pratt are not seismically sound bridges, nor can these historic bridges serve adequately for the next 100 years. Adams between Railroad and the eastern terminus was always intended to be a major artery street connecting to Silverado trail (as shown by the width of Adams near Railroad & Library Lane). It is time to bite the bullet and figure out how to get a MODERN, seismically safe, truck compliant bridge between Deer Park and Zinfandel Lane, crossing the Napa River. By adding "conservatively" 213 residents to St. Helena, using as example 160 cars (1.84 car/unit @ 14' per car) translates to a line of cars about ½ mile long. It is imperative this new neighborhood and all residents have a means of evacuation during a fire, seismic or other hazardous event. 79-3

   The Starr Ave extension (~60') appears to be narrower than the Adams St extension (~65') – these are important residential streets to accommodate larger than average traffic, and sound mitigation measures, visual enhancement measures (ie larger verges, bulb-out parking/cross walks, median strips), bike lanes, should be implemented. 79-4

   Underground wires to prevent fire hazards should be implemented; this is the bordering the urban wildland interface, and all fire mitigation measures should be detailed and modeled for the community. 79-5

   Per the St Helena General plan quoted in this report "Policy 4.7.3: The new eastern entry via the Adams extension" needs to be factored into the long-term planning for the Adams/Silverado Trail connection. 79-6

The DEIR does not address additional financial impacts to the residents of St. Helena by completing the Adams St extension to Silverado Trail.

The DEIR does not account for the cost of a traffic light at Adams and Silverado Trail. 79-6 Cont.

The City of St. Helena is already routing TRUCK traffic down residential streets: Pope to Edwards to Hunt for the 6-week closure of Hunt/Hwy 29. ADAMS Street is the logical and right location for **TRUCK and thoroughfare traffic**. Edwards is no wider than Adams at Adams/Hwy29, but nonetheless, the City of St. Helena is routing traffic on a narrow tree-lined street (with portions of low wires and low branches, and the sweet "oak tree" in the street block). It is past time to take responsibility for safe, planned, attractive thoroughfare traffic. 79-7

The extension of Adams St for this project does not adequately show how 18-wheeler trucks will navigate the "kink" in the road which is the western starting point of this project. This will be the main eastern entrance to St. Helena – it needs to be "beautified" with tree-lined verges and ideally a tree-lined median, bike lanes, and extra buffer between the street and the residences for separation of people and traffic. Now is the time to rectify and plan for this, not make due with 100-year old streets and retrofit them. 79-8

We need 2 WAYS OUT of this valley. To not act on this is irresponsible and a lawsuit waiting to happen when lives could be jeopardized in an emergency. 79-9

2. **The water mitigation measures are completely inadequate.** Providing the cost of 333 bathroom faucets, toilets, sink faucets, & shower heads to the city WILL NOT mitigate the water impact from this project. IF this was the case, the citizens of St. Helena would gladly have paid this ONE-TIME cost to mitigate our water woes by now. 79-10

In fact, does this mean that I can pay $7K/residence and not have water rationing anymore because I've paid an in-lieu fee to the city? This is absurd. **The project needs to pay the true cost of added water consumption, instead of a fake fee to pretend it generates more water. <u>The project must pay for new infrastructure to generate more water for this development.</u>** 79-11

Hunter Subdivision Water Neutrality Calculations, Appendix J, state the home and multi-units will use 17,752 gallons per day / 508 persons = 34.9 Gallons per person per day. 34.9 gallons PER PERSON DAY is completely inadequate to project for the water usage. Do they never wash the dog, wash the car, have a guest, fill a kiddie pool? 79-12

There is a disconnect in the DEIR stating in table 5-1 the need for **15,509,215** gallons per year (Gallons per year is a figure most citizens will understand vs acre feet/year) and the 79-13

17,752 gal/day or **6,479,480** gal/year in the Appendix J. This is a shortfall of 9M+ gallons/year. 79-13 Cont.

The Appendix J is a broad brush, inadequate analysis of the water impact. It is simply a calculation of the cost of water fixtures for an in-lieu fee, and proposing that the citizens of St Helena do MORE to save water so the developer can build out his property. **Many citizens of St Helena have been saving water since the 1970's drought! There is no more water to save in the households.** 79-14

The Appendix J does not account for the ADU usage; it only accounts for 51 homes @ 8 persons/ 4 bed home and 25 multi-unit homes at 4 persons/2 bedroom unit. 79-15

"The per capita water use for St. Helena in 2015 is approximately 220 gallons/day" per DEIR. Right now, the per capita is <65 gallons per person day. 79-16

There are few if any lawns in St Helena (certainly no green lawns now). Schools and parks have different water rules than residents, so water saving here is not going to benefit residents in my opinion. Lawns are completely inappropriate for the landscape design in this project as stated in the DEIR. 79-17

There is no data to support there still exists any non-conserving water fixtures in St Helena. 79-18

The City of St. Helena residents already pay very very high water rates. **This project DEIR does not address potential future additional costs to residents for water rate increases due to poor planning for new water resources, especially those on a fixed income.** 79-19

This project proposes an outdated schematic for single family homes and low-income apartments, when it should be proposing high-energy efficient housing, probably multi-story, with an elevator, to serve both elderly and persons with disabilities, with a native community garden/park with extremely low water needs, and compact private outdoor space, which will further reduce water needs. 79-20

3. **St. Helena does not need more segregated low-income housing.** The developer has a blank slate, and instead is using an outdated ideology for housing. Grouping multi-family units in one location perpetuates the history of segregated housing which is now recognized as having a huge impact on equity, perception of real estate value, and is not a forward-thinking design of inclusivity, integration of housing types.

   The site of the Hunter multi-housing units puts it adjacent to the existing multi-housing units on Monte Vista. The subtext is clear. Put the low-income housing next to the existing apartments—bunch the multi-units low/lower-income housing together because no one wants to look at them or treat them like equal citizens. **This is a stigma** 79-21

for this neighborhood and the City east of the railroad which bears by far, the burden of multi-family housing. This is not a design of inclusivity. The DEIR does not address the impact on neighborhood perceptions by building easily identifiable "low income housing." The low-income housing should look the same as all the other housing in the project, and make efforts to integrate with the adjoining existing housing. This has been successfully done in many communities, where the low-income housing looks just like all the other housing in the neighborhood. 79-21 Cont. 79-22

The low-income housing needs to include homes for purchase, not only rentals. This will be regulated housing and will not appreciate the same as market-rate, but it will allow owners the opportunity for pride of ownership, tax benefits, and further diversify St. Helena. 79-23

The DEIR does not account for the added cost of administering the low-income housing; a trust fund needs to be established. 79-24

The schematic housing plan has rigid housing types: Single family homes, likely 2-level, some with ADUs, and duplex or apartment attached multi-unit 2-bedroom low-income homes. If there were more attached homes, both conservation of land and energy is achieved. 3 stories need to be considered. Elevator access needs to be considered for a project of this size. 79-25

The ADU schematics are lacking in the site plan. Where are they going? To truly make the ADU affordable, there should be site condos constructed by the developer to increase the range of housing price, with supporting site-condo HOA docs provided at the outset. 79-26

There is no recognition of housing for persons with mobility impairments. Our land is too valuable to put all the ADA housing on the street level, and multi-level housing with elevator(s) need to be created. 79-27

The HOA information is lacking in the DEIR, and when there is a flood, or serious project impairment, what bond is placed by the developer? If the HOA does not have financial reserves/stability, how does this affect the low-income housing and the development? 79-28

There is no information in the DEIR explaining how the homes will be available for VA loans, FHA loans, or help to first time home-buyers. 79-29

The DEIR does not address how it will serve very low, low, moderate, and market rate homes specifically, and how many bedrooms/units will each have. There needs to be equity in distribution here, and the "low-income" housing can not only be 2-bedroom residences. 79-30

Additionally:

- There are no public parks affiliated with this project, and there should be both parks and improvement to the river trail. There is no analysis in the DEIR of park's needs. 79-31
- At the public meeting, a resident commented there are important artifacts of native people at this site. I can attest that I have personally seen native artifacts at this site when I walked this area for hours at a time as a child. There is no recognition or addressing of this in the DEIR. This is offensive and a huge oversight. 79-32
- The DEIR is labeled reduced and/or optimized, which degrades the quality of the file. The full file should be available for review. Case in point, Figure 2.1, Regional Location, should be able to zoom in 200%+ to clearly identify adjoining parcels. Zooming in shows a fuzzy image. Figure 2-2 & 2-3 project site photographs are faded, and poor resolution, do not adequately show interface with adjacent properties. 79-33
- On figure 2-4, Single family homeowners names are identified. However, the individuals who live at Hunt's Grove, are not identified on the map. There are human beings who live at Hunt's Grove and Monte Vista, and just because they are not property owners, their presence should not be overlooked. At a minimum, the number of units showing bed/bath count in the multi units should be displayed, to indicate the direct impact to Hunts Grove and other adjacent parcels. The Vineyard Valley owners are also not identified. Size and adjoining agricultural parcels should be identified to the north of the project. # Bedrooms and # of residences should be identified on the site maps. 79-34
- The concept to extend Starr Ave to Fulton should be noted here as years from now, this is a direct possibility, and part of safety/evacuation planning. 79-35
- The Adams Street at a minimum should have bioswales to receive water to replenish the ground water, vs dumping rain water to the sewer infrastructure. 79-36
- Page 2-11: Mt. St. Helena is a significant view. It is notable and similar to views of Mt. Tamalpais, Mt Diablo. Vineyards are a significant view in the City limits. If need be the CITY needs to designate views of Mt St Helena as significant. 79-37
- Even if "The Project site is now designated Zone X, which FEMA identifies as an area with a moderate to low risk of flooding due to a levee failure and is considered protected from a 100-year flood event," the project needs to address the impact during a 100 year flood event. Also, what foundations will be used on top of the added fill at this project site and will prospective home buyers be notified their homes are built on fill? What is the height of the foundations and first floors to absorb a 100 year flood? Surely these homes are built to last 100 years. **Will these owners be required to buy flood insurance? How will this impact the financing available to purchase these homes?** 79-38 79-39 79-40
- The 2019 General Plan designates this area a medium green, "agriculture." I'm not seeing on the 2019 General plan where this project site is designated medium density residential. The DEIR should show the General Plan designation, and it should be linked in the report for ease of location, not buried in an appendix that one has to sift through to find. 2019 General plan showing agriculture at this site: 79-41

- The DEIR states the HOA would oversee street lights and public landscaping. This is confusing and inadequate. There is minimal public landscaping, and there should be a park, verges with trees, a walking path to the Napa River. Why would the HOA service the streetlights on a city street? Is it a private street, and if so the HOA needs to pay for full street maintenance, the common sewer line and underground utilities. 79-42
- There is no % for the arts this project. A project of this size needs to contribute to the arts, culture and history of our community. Funds for a permanent City arts project must be considered. 79-43

I expect our city and each council member, each commission member to express their opinion on this project. 79-44

I am disappointed in the level of communications from the City to outreach to citizens for comments, and to make it easy for citizens to comment on this project. 79-45

Thank you for your serious consideration.

Tracy McBride, 510-517-6202, tracymcbride22@gmail.com

Response to Letter 79
Tracy McBride
November 28, 2021

79-1 The commenter states their support for more housing in the City but opines that the Draft EIR includes inaccurate information.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

79-2 The commenter asks, "... why does no one in town support this project?"

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

79-3 The commenter calls for the extension of Adams Street to connect to the Silverado Trail and for the extension to be suitable for trucks. The comment also states an opinion that emergency evacuation would be affected by the Proposed Project.

The Project does not include the future expansion of Adams Street connecting to Silverado Trail. This is a separate City project and is not required for this Project. The comment is noted and forwarded to the decision makers for their consideration. For additional information regarding emergency vehicle access and evacuation, please see Master Response 1.

79-4 The comment states an opinion that the size of the Starr Avenue extension is narrower than the Adams Street roadway extension and that these roadways are important to the neighborhood since they accommodate many uses.

Section 3.14 of the Draft EIR describes the extension of both Starr Avenue and Adams Street. Both roadways would be constructed consistent with City street standards and would accommodate emergency service vehicles, and maintain accessibility for pedestrians and bicyclists, according to the City's street design standards.

79-5 The comment states an opinion that overhead electrical lines should be undergrounded to prevent fire hazards.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. The City will require, per policy, that all utilities in the Project be placed underground.

79-6 The comment states an opinion that the Draft EIR does not address financial impacts to City residents in order to complete the Adams Street extension to Silverado Trail.

The extension of Adams Street to Silverado Trail would require further study and approval by the City and is not required for this Project. Additionally, CEQA does not require a discussion of financial impacts because they are not considered an impact to the environment.

79-7 The comment states the commenter's observation that truck traffic in the neighborhood is using residential streets currently and opines that the Project would worsen truck traffic.

The Proposed Project is not expected to generate any additional truck traffic other than the temporary truck traffic as a result of Project construction. The City's Municipal Code, Chapter 10.36, defines the City's truck traffic routes that apply to heavy trucks in general.

79-8 The comment states an opinion that the extension of Adams Street would not be suitable for large trucks and that both Starr Avenue and Adams Street should be redesigned.

Please see Responses to Comments 79-4 and 79-7.

79-9 The comment states an opinion that there needs to be an additional route into and out of the City.

The comment does not identify any specific areas where the EIR or analysis is inadequate. Therefore, no response is required; the comment is noted and forwarded to the decision-makers for their consideration. However, please see Master Response 1 regarding emergency evacuation routes.

79-10 The comment states an opinion that faucet, shower head, and toilet retrofits would not mitigate the water impact from the Project.

Please see Master Response 2.

79-11 The comment states an opinion that the Project needs to pay the true cost of added water consumption, including new infrastructure, instead of a "fake" in-lieu fee.

Please see Master Response 2.

79-12 The comment states an opinion that the calculations in Appendix J which state an estimate of 34.9 gallons of water per person per day is inadequate.

Please see Master Response 2.

79-13 The comment states an opinion that there is an inconsistency between Table 5-1 in the Draft EIR which states the need for 15,509,215 gallons of water per year, versus the 6,479,480 gallons per year stated in Appendix J.

Please see Master Response 2.

79-14 The comment states an opinion that Appendix J contains an inadequate analysis of Project water impacts and is only used to calculate the cost of water fixtures for an in-lieu fee. The commenter states that households are unable to save more water than they are currently.

Please see Master Response 2.

79-15 The comment states an opinion that Appendix J does not account for the ADUs included in the Project.

Please see Master Response 2.

79-16 The comment states, without providing support, that per capita water use in the City is around 65 gallons per person per day, which is inconsistent with the Draft EIR statement that water use in 2015 was approximately 220 gallons per day.

Please see Master Response 2. Without a source for the "<65 gallons per person per day" figure, no additional response can be provided.

79-17 The comment states an opinion that lawns are inappropriate for landscape design.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

79-18 The comment states an opinion there is no data to support that there are any non-conserving water fixtures still present in the City.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 2.

79-19 The comment states an opinion that the Draft EIR does not address the additional costs to City residents for water rate increases.

CEQA does not require a discussion of financial impacts as they are not considered impacts to the environment; Therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

79-20 The comment states an opinion that the Project plans are outdated and should instead include multi-story, high-energy efficient housing with an elevator, native community garden, and compact private outdoor space.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

79-21 The comment states an opinion that the City should not segregate low-income housing from the rest of the neighborhood and that the Project would perpetuate housing segregation.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

79-22 The comment states an opinion that the Draft EIR does not address the impact on neighborhood perceptions on real estate value resulting from “low-income” housing. The commenter suggests that low-income housing should look the same as other housing in the neighborhood.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required However, the comment is noted and forwarded to the decision makers for their consideration.

79-23 The comment states an opinion that low-income housing should include homes for purchase.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

79-24 The comment states an opinion that the Draft EIR does not account for the added cost of administering low-income housing.

CEQA does not require a discussion of financial impacts; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

79-25 The comment states an opinion that the addition of more attached homes would conserve land and energy and suggests that buildings should be 3 stories tall with elevators.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

79-26 The comment asks where ADUs are proposed and suggests that condominiums should be constructed to increase the range of housing prices.

The Project applicant proposes to construct 11 ADUs on 11 of the 51 single family lots created by the proposed Tentative Subdivision Map. The specific lots have not been identified at this time. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

79-27 The comment states an opinion that housing for people with mobility impairments should be included and suggests that multi-level housing with elevators be provided.

At this time, Project applicant is only seeking approval of the Tentative Subdivision Map. The City will review proposed maps and building plans to ensure ADA compliance. The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

79-28 The comment states an opinion that the Draft EIR lacks HOA information and requests information on the Project's financing. The commenter also questions if there is a flood how low-income housing would be affected if the HOA does not have financial reserves.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. CEQA does not require a discussion of financial impacts as they are not considered an impact on the environment. The comment is noted and forwarded to the decision makers for their consideration.

79-29 The comment states an opinion that the Draft EIR does not contain information explaining if the homes would be applicable for VA loans, FHA loans, or accessible for first time homebuyers.

CEQA does not require information regarding financing options available for future homebuyers be evaluated. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

79-30 The comment states an opinion that the Draft EIR does not address how the Project will provide affordable housing and how many bedrooms/units each home or building will have. The commenter suggests that low-income housing not be limited to two-bedroom residences.

On page 2-18 of the Draft EIR it is explained that the Project's affordable housing is still being discussed by the City and the Project applicant and is not proposed or required for review and approval with the Tentative Subdivision Map. A final Affordable Housing agreement, approved by the City Council, would be required prior to recordation of a final subdivision map. The commenter's opinion on low-income housing is noted and forwarded to the decision makers for their consideration and no further response is required.

79-31 The comment asserts that there is no analysis of parks in the Draft EIR and that the Project should include parks and improvements to the river trail as part of the Project.

The need for parks and recreation facilities is addressed and analyzed in Section 3.12 of the Draft EIR. Additionally, park and recreational impact fees are imposed upon all residential development within the City. These impact fees are used to cover the cost of land acquisition and park improvements. The commenter's opinion is noted and forwarded to the decision makers for their consideration and no further response is required.

79-32 The commenter states that they have personally seen native artifacts at the Project site and there is no recognition of these resources in the Draft EIR.

Cultural and tribal cultural resources are discussed in Section 3.5 of the Draft EIR. The potential for cultural (prehistoric or historic-era resources) including human remains and tribal cultural resources to be present on the site was thoroughly evaluated as part of the Draft EIR analysis. Please also see Response to Comment 55-4.

79-33 The comment asserts that the electronic copy of the Draft EIR was reduced and figures cannot be fully zoomed in or are of poor resolution.

The Draft EIR was posted for public review on the City's website and as noted on page 1-4 of the Draft EIR, a copy of the document was also available at the City offices during normal business hours (Monday through Friday, 8:30 a.m. to 5:00 p.m.).

79-34 The comment asserts that Hunt's Grove and Vineyard Valley projects are not identified on Figure 2-4 and goes on to state Figure 2-4 should show the bed/bath count for multi-family units to indicate the direct impacts to Hunt's Grove and other adjacent parcels. The commenter also states that the size of adjoining agricultural parcels to the north of the Project site should be identified as well as the number of bedrooms and residences.

Figure 2-3 identifies adjacent land uses, including the Hunt's Grove apartments and the Vineyard Valley Mobile Home Park. A more detailed discussion of adjacent or surrounding land uses is discussed starting on page 2-1 in Chapter 2, Project

Description. The surrounding agricultural lands are identified. Figure 2-4 shows the Project's proposed Tentative Map. The number of bedrooms/baths are not required to be provided or analyzed in an EIR. An EIR evaluates the "project footprint" or area of disturbance along with the demand for services and utilities new residents would create. The number of bedrooms/baths has no bearing on the analysis. There is no requirement that an EIR identify the number of bedrooms/baths in any adjacent or nearby residential uses, including any residences located in the County.

79-35 The commenter asserts that the Draft EIR should note the possible extension of Starr Avenue to Fulton.

The Project does not require the extension of Starr Avenue beyond connecting to Adams Street. Any future extension of Starr Avenue is a separate project and not required to analyzed in this EIR.

79-36 The commenter states an opinion that Adams Street should receive bioswales to replenish groundwater.

A discussion of the Project's stormwater features is discussed on page 2-29 in Chapter 2, Project Description and further evaluated in Section 3.9, Hydrology and Water Quality. The comment does not address the accuracy or adequacy of the Draft EIR. The commenter's opinion is noted and forwarded to the decision makers for their consideration and no further response is required.

79-37 The commenter states an opinion that the City should designate views of Mt. St. Helena as a significant view.

The comment does not address the accuracy or adequacy of the Draft EIR. The commenter's opinion is noted and forwarded to the decision makers for their consideration and no further response is required.

79-38 The comment states an opinion that the Project needs to address the impact of a 100-year flood event.

The Draft EIR evaluates flooding in Section 3.9, Hydrology and Water Quality. Please see Master Response 3 for additional information on flood risks.

79-39 The commenter asks what buildings foundations will be required and whether prospective homebuyers would be notified that their homes are built on fill and if the homes would be affected by a 100-year flood.

As explained on page 2-31 in Chapter 2, Project Description, "[t]o level the site and to ensure a stable base for new development, the existing fill/soils on the site would be removed, recompacted and returned to the site along with additional fill." Please see Master Response 3 regarding flooding concerns and Response to Comment 32-1 regarding the geology of the site.

79-40 The commenter asks if homeowners would be required to buy flood insurance and how this would impact the financing available to purchase the homes.

The comment does not identify any specific areas where the EIR or analysis is inadequate. Therefore, no response is required; the comment is noted and forwarded to the decision-makers for their consideration. However, please see Master Response 3 regarding flood concerns and Response to Comment 32-2 regarding flood insurance.

79-41 The comment asserts that the 2019 General Plan designates the site for agriculture rather than medium density residential and that this information should be included in the report rather than in an appendix.

The St. Helena General Plan Update 2040 designates the site for medium-density residential as shown in Figure 2.1 (https://www.cityofsthelena.org/sites/default/files/fileattachments/planning_resources/page/3505/final_plan_compiled.pdf). This information is also included in the Draft EIR Project Description (Chapter 2) and the Land Use section (section 3.1) of the Draft EIR. The commenter may be referring to Figure 1.3 of the General Plan Update, which shows existing land uses rather than those proposed under the General Plan Update. The comment is noted and forwarded to the decision makers for their consideration and no further response is required.

79-42 The comment opines that there should be a park with trees and a walking path to the Napa River. The commenter also questions why the HOA would service City streetlights and if the HOA needs to pay for full street maintenance and utilities.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration. At this time, Project approval only requires approval of the Tentative Subdivision Map. It is anticipated the Project's HOA would oversee public landscaping and other community owned facilities.

79-43 The comment states an opinion that the Project should contribute to the arts and that funds should be allocated to this purpose.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

79-44 The commenter states that they expect the City, including council members and commission members to express their opinions on the Project.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

79-45 The commenter states that they are disappointed in the lack of outreach and ability for the public to provide comments on the Project.

Please see Response to Comment 15-4. The comment does not address the accuracy or adequacy of the Draft EIR. The commenter's opinion is noted and forwarded to the decision makers for their consideration and no further response is required.

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Comment Letter 80

November 30, 2021

Sandra McCorkle
1178 Meadowcreek Circle
St. Helena, CA
Maya De Rosa, AICP
Planning Building Director
City of St. Helena, Planning and Community Improvements Department
1572 Railroad Ave.
St. Helena, CA 94574

Dear Maya

The following are my comments regarding the draft EIR for the Hunter Subdivision Project, Assessor's Parcel Number 009-030-057

Hunter Project DEIR Comments and Questions

Chapter 3 Project Description pages 3-5 to 3-7.

It is challenging to review the September 2021 Draft EIR Hunter Subdivision Project to determine whether it adequately identifies the significant environmental impacts as is required under CEQA. This EIR is to provide information to support the approval for a Tentative Map for a specific project-- the Hunter Project. According to the California Department of Real Estate, approval of a Tentative Map "is "a significant milestone in the development process and is a point at which much uncertainty regarding the project has been removed." The EIR should examine all phases of the project including planning, construction and operation. It should include a description of the project, a map and probable environmental effects. 80-1

I believe there is a great deal of remaining uncertainty regarding the project description and the map which makes it difficult to determine whether the DEIR provides sufficient information regarding substantial environmental impacts to approve the Tentative Map application. The September 9, 2010 Application (#2010-40) for a Tentative Parcel Map describes a project that included 53 lots with a total of 76 residential units including 51 single-family detached and 25 multi-family units with 5+ units. No accessory dwellings were listed in the Application. The 2010 Tentative Map Set showed the 51 single family lots and only a faint outline of the "future Workforce Housing" which were to be apartments. It is the 2010 Application and March 28, 2011 Completeness Letter that are still cited in the September 2021 DEIR as the relevant documents. Yet City Records-- (Project #: 10-40) Hunter Residential Subdivision (APN 009-030-057)-Historical Records-- show a Tentative Map Plan revision filed in August 2018 and another Tentative Map_2.01.19 which include the 11 ADUs and 87 units. There is a revised "Notice of 80-2 80-3

Completion document and Transmittal letter dated 9/23/21 which shows in the footer as a "revised 2010" document. This Completion Document states there are 87 units. The 2021 DEIR Chapter 3 Project Description describes the project as having 51 single-family lots with 11 having income restricted (Above Moderate-Income) units; and 25 attached two-story "duets" which are two-story two-bedroom units of 1,100 square feet each reserved for very low-income and moderate income. 80-3 Cont.

The question is, it reasonable to continue to rely on the 2010 Application for a Tentative Map and the 2011 Completion Letter from the City or have these been significantly revised to meet new conditions? If they have been revised to meet new conditions—e.g., City and State Policy regarding affordable housing and the City's 2015 Housing Element for example-- is the original application valid? If the changed conditions in some areas have been addressed with the revised Map and Project Descriptions should the 1993 General Plan or should the project be evaluated under the Current General Plan and conditions including up-dated Water Supply Availability? What rules allow an Application for a Tentative Subdivision Map to remain valid for a decade? Or to be revised on numerous occasions? If the Tentative Maps have been revised and resubmitted to meet or take advantage of new conditions, is it still valid to rely on guidance from the 1993 General Plan which is 28 years old? 80-4 80-5 80-6

Further uncertainty about the project under review was raised by the City with regard to whether or not the project as described is consistent with the City's Inclusionary Housing Ordinance. On February 27, 2020 the City wrote to the applicant concerning unresolved issues (Email to Ben vanZutphen re: NOTIFICATION OF FINAL UNRESOLVED ISSUES QUESTIONS-Hunter Residential Tentative Map Application Re-submittal (File no. PL 10-040) stating that the project does not meet the ordinance in several ways: the affordable units are all rental, the affordable units are not dispersed throughout the project, the affordable units are of a different size and do not have comparable numbers of square feet or bedrooms. Furthermore, there is insufficient information to determine if the affordable units are indistinguishable from the market rate units in terms of quality and exterior. The City staff concludes that it "does not believe this proposal is consistent with the City's inclusionary housing requirements." "Based on the information you have provided to this point, Staff cannot support your current proposal as compliant with the City's inclusionary housing requirements." 80-7 80-8

There are more questions related to the present project included in this memorandum. The applicant responded that they would make the 11 ADUs two bedrooms. What are the implications for the Tentative Map? The point is that if the present project does not meet the Inclusionary housing requirements what other changes in plans and the Tentative Map will be made to assure these requirements are met? Will it mean greater density with the potential for larger environmental impacts? At this point there is too much uncertainty about the project and the resulting project which is "blurry" and inadequate to assure that the DEIR adequately assesses the probable environmental impacts. 80-9 80-10

Response to Letter 80
Sandra McCorkle
November 30, 2021

80-1 The comment states an opinion that it is challenging to determine whether the EIR adequately identifies significant environmental effects and goes on to state that the EIR should examine all phases of the project including planning, construction, and operation.

As stated in Chapter 2, Project Description on page 2-32, the Project is only requesting approval of the Tentative Subdivision Map at this time. Subsequent approvals would involve review of discreet components of the Project. The Draft EIR evaluates the direct and indirect impacts associated with construction and operation of the Project with housing and the associated change in the underlying existing conditions present on the site. If it is determined there would be a change in the severity of a Project impact associated with any of the subsequent Project approvals sought by the applicant, additional CEQA review may be required. The public will have the opportunity to review and comment on these subsequent applications. The commenter's opinion is noted and forwarded to the decision makers for their consideration and no further response is required.

80-2 The comment states an opinion that there is uncertainty regarding the Project description and tentative map because the number and distribution of housing units is different in separate tentative map applications.

As stated in Chapter 2, Project Description, an application was filed with the City for a Tentative Subdivision Map to subdivide the property for residential development. The application was accepted as complete by the City on March 28, 2011. The Draft EIR incorporates changes to the tentative map requested by the City since the original submission. The Project applicant is proposing to subdivide the site into 51 lots (sized for single-family residences), a 3.4-acre parcel, and two lettered lots (for the existing well and undeveloped land). Homes on 11 of the 51 lots would be developed with an ADU as part of their initial construction. The Project applicant also intends to ultimately develop the 3.4-acre parcel with 25 attached multifamily residential units.

80-3 The comment states that the Notice of Completion indicates there would be 87 units as part of the Project and compares this to the information in the Draft EIR.

Please see Response to Comment 80-2. The Project applicant is proposing 51 single-family residences, 25 attached multifamily residential units, and 11 ADUs, which would total 87 units.

80-4 The comment asks whether it is reasonable to continue to rely on the 2010 application for the Tentative Subdivision Map and the 2011 Completion Letter from the City and whether the original application is still valid.

As explained starting on page 3.0-2 in the Draft EIR as well as on page 2-12, since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project. Nonetheless, this EIR also evaluates consistency with the General Plan Update 2040 for informational purposes.

80-5 The comment asks whether the Project should be evaluated under the current General Plan update since the details of the tentative map have been revised to meet new conditions.

Please see Response to Comment 80-4.

80-6 The comment asks what rules allow the tentative map application to remain valid since 2011, and to be revised during its review.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The Project is being processed in accordance with all applicable City and state laws. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

80-7 The comment expresses the commenter's uncertainty about whether or not the Project is consistent with the City's Inclusionary Housing Ordinance.

The comment does not address the adequacy of the Draft EIR, but instead refers to the Project's consistency with the City's Inclusionary Housing Ordinance. However, as noted in the Draft EIR Chapter 2, Project Description, review and approval of an Affordable Housing Agreement by the City Council is a subsequent discretionary approval and not part of the Tentative Subdivision Map being considered by the City at this time. A determination of consistency will be made at the time that subsequent application is submitted and reviewed.

80-8 The comment states an opinion there is insufficient information to determine if the affordable housing units are comparable in quality to the market rate units.

See Response to Comment 80-7. Review and approval of an Affordable Housing Agreement by the City Council is a subsequent discretionary approval and not part of the Tentative Subdivision Map being considered by the City at this time. Consistency with the requirements of the Inclusionary Housing Ordinance will be determined at the time an application is filed.

80-9 The comment expresses the commenter's concern about potential changes to the Project and Tentative Subdivision map if the Proposed Project does not meet the Inclusionary Housing requirements.

The proposed Tentative Subdivision Map could be developed consistent with the Inclusionary Housing Ordinance. Compliance with the City's Inclusionary Housing Ordinance would be evaluated as a subsequent approval, as explained on page 2-32 of the Draft EIR.

80-10 The comment requests more information specific to the requirements of the Inclusionary Housing Ordinance and whether the Project would require an increase in units. Specifically, the commenter asks if there would be increased density with the potential to create greater environmental impacts. The comment questions the adequacy of the Draft EIR in light of these potential changes.

The current application is requesting approval of the Project's Tentative Subdivision map, as described in Chapter 2, Project Description. Compliance with the City's Inclusionary Housing Ordinance would be evaluated as a subsequent approval, explained on page 2-32. As noted on page 2-13, the Project applicant has not requested consideration of a density bonus as part of the Proposed Project application.

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Comment Letter 81

From: Kathleen McCreedy <kamccreedy@gmail.com>
Sent: Tuesday, November 2, 2021 9:39 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Vote "Against" Proposed Hunter Subdivision

Good morning Maya Derosa,

Firstly I want to thank you, and the city of St. Helena for caring for our wonderful small town and making your best efforts to maintain her facilitation of a safe, nurturing, city for it's residents and visitors.

I am writing today to have my voice heard "Against" the proposed Hunter subdivision. My husband and I have lived here in St. Helena for over 20 years and 5 years ago downsized to live in the Vineyard Valley Senior Park.

Briefly here are a few of my concerns:

I believe the challenges delivered by this project are many.

81-1

Traffic congestion, water supply, sewer connections and emergency evacuation pathways are currently top of mind.

81-2

Also on a more personal level, this is a wildlife corridor and an incredible open space that supports an area that is NOT fenced off to wildlife or humans. In world efforts to support wildlife, many conservationist are setting up tourist driven wildlife adventures all over the world to prevent additional clear cutting, agricultural impeachment, commercial and residential development. Let's find a way to share the space and look for ways that we can care for our city of St. Helena (gain taxes) in more creative sustainable ways.

81-3

Thank you for your time and for all that you do in caring for our beautiful city.

Best Regards,
Kathleen McCreedy
11 Los Robles Ct.
St. Helena, CA 94574
(707) 280-1278

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Response to Letter 81
Kathleen McCreedy
November 2, 2021

81-1 The comment states opposition to the Project and provides the commenter's history as a resident of the City.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

81-2 The commenter generally states their concerns related to traffic congestion, water supply, sewer capacity, and emergency evacuation.

The comment does not raise specific concerns related to these topics or any specific areas where the Draft EIR analysis is inadequate. However, please see Master Responses 1, 2 and related to emergency evacuation, water supply, and wastewater conveyance and Response to Comment 36-2 that addresses general traffic congestion concerns.

As described in Section 3.13 of the Draft EIR, the Proposed Project would not exceed the City's current permitted wastewater treatment plant capacity; also, pursuant to Municipal Code Section 3.32.020, the City collects development impact fees on new development to pay for public improvements related to sewer projects. The Project applicant would be required to pay these fees, which would help fund future improvements to the City's sewer system. Please also see Master Response 4.

81-3 The comment asserts that the Project site serves as a wildlife corridor and urges the City to explore ways to conserve the site and generate tax revenue for the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Please see Responses to Comments 14-2 through 14-6, 55-3, 121-28 and 121-32 for more information on impacts to wildlife and habitat.

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Comment Letter 82

From: Joe McGrath <joe.mcgrath65@gmail.com>
Sent: Thursday, November 4, 2021 2:22 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; Joe Mcgrath <joe.mcgrath65@gmail.com>
Subject: [External] Comments on Hunter EIR

Maya:

As you know I am a developer and so it is not lightly that I enter comments on another project.

CEQ/EIR:

For almost my entire life California has been under CEQA regulation. As a planning commissioner for over six years I have also sat through many CEQA EIR reviews. And my conclusion is that other than air quality, and perhaps water quality improving in my lifetime, CEQA seems to be an abject failure with regard to respecting California's natural environment. Traffic is worse. Fires are worse. Water is more scarce. Snow is disappearing. No public transportation. Freeways are getting wider. Fish are disappearing. On and On. All under the watchful eye of CEQA. 82-1

Unfortunately I have not yet had the chance to read thoroughly the entire report, but have skimmed through it. I hope to provide more thoughtful comments in the future. Unfortunately these reports seem designed to be so large and exhaustive as to tire all but the most active citizen who has time to spare. But I will comment on a few items: 82-2

3.9. Hydrology 1.

LTS - Seriously?

First Law of Holes. When you find yourself in a hole, stop digging. The notion that we take a typical 1950's era suburban model and plant it in the middle of St. Helena, right next to a river w/ irrigated landscaping in today's environment is insanity.

The notion that significant utilization of an existing agricultural well upstream from the City's main will definitely have Less than Significant Impact is not professional. How about a Potential Impact at least, so it can be looked at? 82-3

I personally swapped toilets to meet Water Neutrality on McCorkle project. It is an arduous task to find them and get them to add up. I don't imagine that after months (and potentially years in the future) of being on a highly fee punitive 65 gallons/day water cap that there will be many more toilets to change over years from now. If you are going to ask the developer for water neutrality, ask for money instead and put the investment in infrastructure. As an owner of multi-family apartments, the punitive fees associated with exceeding a 65 gallons/day allocation keeps me up at night. The first thing I did was to place a Flume on the meter main with cellular wifi that signals me immediately of use beyond budget. The City's process is to routinely send me letters for my apartments saying they think I have a leak (because of continuous water flow) at my units. The letter is typically 30 days later from a meter read that stretches back another 30 days. Water under the bridge as they say. **Invest in real-time meter reading w/ statistical monitoring with alerts and event management so that excursions notify meter owner immediately.** Even a low-flow toilet can waste hundreds of gallons a day with a minor leak. 82-4

Do not allow any landscaping that requires irrigation (beyond what is necessary for plants to take hold). California and Napa Valley were beautiful before we started landscaping it. Our "beautiful" landscaping projects have not made it more beautiful. Oak trees seem to do well. As do Olives. And Lavender. And Manzanita. etc. Do not allow landscaping that takes the "place" out of the place. The presentation visuals could be Sacramento, or Phoenix for that matter.

82-5

Do not allow Pools or at minimum pools w/o covers.

82-6

3.9. Hydrology 2.

Have we assessed the load impact of runoff so close to the Napa River and upstream of VVMobile Home Park and Pope Street bridge. Had this development been built during our recent 12" rainstorm, would that additional load have been accommodated or would it have taken out the Pope Street bridge? **The site needs to fully accommodate all stormwater drainage and do it far from Napa River to allow sufficient dwell time before that water permeates into the River.**

82-7

3.10 Land Use:

LTS?? Hardly when looked at in context.

Land use is about making choices on how to best utilize land resources to serve the community. "Sub-urban" communities that are closer to San Francisco and the East Bay can be relatively homogenous socio-economically, and still kind of "work" because of the adjacency of jobs or housing in adjacent communities, St. Helena is more isolated and must for its survival and quality of life be a more socio-economically diverse community. That is how it used to be. And that is what is disappearing. As second home ownership rates increase and the likes of Pacaso further take primary homes off the market the system is getting more and more stressed. This in turn is causing the "workers" of the community to commute here - from Lake County, from American Canyon and Napa, and from Santa Rosa, and further - which has greatly exacerbated traffic and quality of life. If I had to guess, St. Helena is about 20-25% larger population than it was 40 years ago. And if I had to guess Traffic is 10X worse.

82-8

It is reasonable to expect that the purchase price of these homes will be well north of $1.5M and likely $2M plus. And it is reasonable to expect that more than 50% will be second homes. **More services required, more commuting required. More commuting traffic. Benefit?**

Segregation vs. integration of the multi-family from single-family actually exacerbates the parking problem.

82-9

Deed Restrict the SFH to <=200% AMI? so that they don't become second homes?

Land use is about making choices.

82-10

3.12 Public Services and Recreation

LTS - again. Seriously. How about at least PS.

Hundreds of people walk by this site everyday for their recreation. **This Project will de-facto take away recreation area, and not add back recreation area demand that it creates.**

82-11

3.14 Transportation and Circulation:

See Land Use. The Vehicle Miles Travelled approach is flawed. Most of the VMT will not come from resident's trips. **It will come from the added service requirements of landscapers, painters, handymen, restaurant employees etc, etc that serve this new community that commute from other communities.** Directing all of this traffic onto Main Street or across Pope Street is crazy. If we collectively did not comprehend what sort of traffic moves on the SIlverado Trail prior to its closure, I think we now have a pretty good idea. **This project should not be built without a viable connector/bridge to the Silverado Trail that does not require using main street, nor the existing Pope and Pratt Street heritage bridges.**

82-12

82-13

Exposure to Wildfires:

Again LTS?

A little over a year ago, on that Tuesday night, the Glass fire was searching for a way to jump into St. Helena and burn it down. We don't think that this community within rock throwing distance of Howell Mountain Road might one day be that bridge? Let's get firewise and figure out how not to make that happen. Roofing material, Eave design, Landscape Design, Defensible space, Cisterns for fighting fires (hey..maybe the same cistern that was used to dampen stormwater runoff?)

82-14

Net-Zero Energy:

Let's be part of the solution and be progressive. It is possible to make this project Net-Zero energy, so let's do that.

82-15

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Response to Letter 82
Joe McGrath
November 4, 2021

82-1 The commenter states an opinion that CEQA regulations have not improved California's natural environment.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

82-2 The commenter states that they have not read the Draft EIR thoroughly and that CEQA reports are too lengthy to be reviewed by most citizens.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

82-3 The comment states an opinion that the determination of a less-than-significant impact regarding use of the existing agricultural well upstream from the City is unprofessional and should instead be considered a potentially significant impact.

Please see Response to Comment 57-5 and Master Response 2.

82-4 The comment states an opinion that toilet retrofits would likely not be effective to meet water neutrality goals and suggests that the developer should invest in infrastructure to use recycled water. The comment also suggests that the Project incorporate real-time water meter reading and monitoring.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. See also Master Response 2.

82-5 The comment states an opinion that landscaping requiring irrigation should not be allowed and that new plants should be appropriate to California.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. As stated in Chapter 2, Project Description, all public landscaping and irrigation would be required to meet the Model Water Efficient Landscape Ordinance requirements in Title 23, Chapter 27 of the California Code of Regulations. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

82-6 The comment opines that pools, or pools without covers, should not be allowed.

The Proposed Project does not include any pools but it does not preclude future homeowners from installing a pool. The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

82-7 The comment asks whether the impact of runoff close to the Napa River and upstream of the Vineyard Valley Mobile Home Park and Pope Street bridge has been assessed and that the Project site should fully accommodate stormwater drainage far from the Napa River.

Please see Master Response 4 and Responses to Comments 35-4 through 35-6.

82-8 The comment states an opinion that the land uses in the City are causing workers to commute from other areas thereby increasing traffic congestion in the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

82-9 The comment states an opinion that the Proposed Project would result in more commuting traffic congestion and more parking supply issues in the City.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. However, at the time building permits are requested, as required by the Municipal Code, the City will confirm the Project complies with Section 17.124.030.A.1 of the City's Zoning Code that addresses residential parking requirements. Please see Responses to Comments 10-2 and 36-2 that address general traffic concerns.

82-10 The commenter suggests income restrictions for the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

82-11 The comment asserts that the Project would take away a recreational area and therefore the impact should be considered potentially significant.

The Project site is privately-owned and is therefore not a public recreation area. Additionally, as discussed in Section 3.12, Public Services and Recreation, the Proposed Project applicant would pay required park fees to be used by the City to purchase land to construct new parks or upgrade existing recreation facilities. The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft

EIR; therefore, no further response is required. Please see Chapter 3, Changes to the Draft for a trails map that shows trails adjacent to the Project site.

82-12 The comment states an opinion that the Project's VMT analysis approach is incorrect and that the VMT would not be from the residents of the Project but rather employees that serve various needs of the residents.

The VMT analysis for the Project has been conducted per guidance provided by the Governor's Office of Planning and Research in its Technical Advisory for Evaluating Transportation Impacts in CEQA. The metric for evaluation of VMT for residential projects is VMT per capita or resident and for most non-residential or office projects is VMT per employee. The Project proposes only residential use, therefore, the VMT of the Project would be assessed by estimating the vehicle miles traveled by Project residents for various purposes, such as work, shopping, education, recreation etc. The traffic generated by the Project has been evaluated in the traffic study prepared by Dudek.

82-13 The comment states an opinion the Proposed Project should not be built without an additional connection to Silverado Trail.

The Project does not include the extension of Adams Street to Silverado Trail. This is a separate City project and is not required for this Project. The comment is noted and forwarded to the decision makers for their consideration.

82-14 The comment states an opinion that the Project should incorporate fire-wise design and defensible space.

The Project's residences would be built in compliance with the California Building Code and California Fire Code requirements for fire protection in place at the time. Public landscape areas and yards would be regularly irrigated and maintained during the dry summer and fall months to reduce fuel for wildfires. Additionally, please see Master Response 1 regarding emergency evacuation.

82-15 The comment suggests that the Project be Net-Zero energy.

The Project would meet the most current Title 24 standards which require the design of building shells and building components to conserve energy. These standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards went into effect starting January 1, 2020. The 2019 standards aim to reduce energy use in new homes by more than 50% and require installation of solar photovoltaic systems for single-family homes. Development would be subject to whatever version of the state's Building Efficiently Standards are in effect at the time of construction.

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Comment Letter 83

From: John Milliken <jmzin@comcast.net>
Sent: Tuesday, November 2, 2021 2:56 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Subject: [External] PC Meeting 11/2/2021 Public Comment on Hunter Project DEIR from John Milliken

First of all, I would like to provide a link to an article written by Professor Nicholas Printer of the UC Davis Center for Watershed Science that I think should be mandatory reading for each Planning Commissioner and the City Staff involved in preparing the DEIR.

https://californiawaterblog.com/2016/07/17/st-helena-california-dealing-with-a-field-of-dreams-levee-residual-risk-and-a-flood-of-controversy/

None of the issues covered in this article were mentioned in this DEIR.

83-1

Second, I would like to express my dismay at what an unprofessional, non-comprehensive, and shallow effort this latest DEIR effort represents. It is absolutely mind boggling that this DEIR could only identify two significant impacts (both traffic related) for a major development project of this size after an almost four-year effort at a cost of over $450,000. The DEIR reads like an infomercial the applicant. I intend to submit separate comments on the many deficiencies and missed impacts either completely ignored or glossed over by this so-called DEIR. I do not know who was in charge of this effort, but I think the City Council and Planning Commission should seriously consider an inquiry into how this happened and there should be consequences for those responsible. This community (whose environment is being impacted!) deserves much better than this and this DEIR effort crosses the line of professional negligence. I am not asking for a DEIR that supports the grievances of the many members of the community who are opposed to this mammoth 87-unit development, rather, I was expecting a balanced DEIR that fairly identified ALL the environmental impacts presented by this development and was prepared to lawful CEQA standards. This DEIR does neither of those things. How can a DEIR propose meaningful mitigations if it cannot properly identify environmental impacts?

I do not know if this substandard DEIR effort was by intent or the result of a lack of oversight by the Lead Agency, the City of St. Helena, but the end product is seriously flawed. As you can probably see by all the public comments submitted to date and an avalanche of comments to be submitted by the November 8th deadline, I am not the only one to have noticed this. Thankfully, many members of our community have taken on the responsibility of correcting this wrong and will be submitting comments that identify way more impacts than were identified in this DEIR. And, they are not being paid $450,00 to do this and were only given 45 days to prepare comments instead of four years.

83-2

Oh,..one more thing. When several members of the community (whose environment is being impacted!) politely asked if the comment period could be extended so that they could have more time to prepare researched, cogent comments on the lengthy 28 Mb download and 633 page DEIR document, they were quickly rebuffed and simply told no. This seems a little harsh considering that this second DEIR effort is heading into its fifth year after a failed first seven-year effort. FYI: The comment period for the first failed EIR effort in 2012 was extended to 90 days. I guess this contempt for the community (whose environment is being impacted!) is the new norm and this is what we will be dealing with for the remainder of the process. It is my hope that Planning Commissioners will ask staff some questions about this DEIR process when they are afforded the opportunity after the Public Hearing closes. The ability to ask questions was not afforded community members.

83-3

John Milliken

jmzin@comcast.net

707-963-8134 (Office) 707-486-4266 (Mobile\Text)

1256 Hudson Ave.

St. Helena, CA 94574

Response to Letter 83
John Milliken
November 2, 2021

83-1 The comment refers to an article written by a professor at U.C. Davis and recommends City staff and the Planning Commission review the article.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

83-2 The comment states an opinion the Draft EIR does not address potential impacts and does not meet the standards set forth in CEQA for the preparation of EIRs.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the Draft EIR was prepared in compliance with California Public Resources Code [PRC], Section 21000 et seq., the CEQA Guidelines (14 CCR 15000 et seq.), and the City's procedures for implementing CEQA.

83-3 The comment refers to requests to extend the comment period.

Based on requests from the public, the City extended the public comment period from the required 45-days to 67-days to provide more time for review and comment. During this review period, the Draft EIR for the Project was available at (1) the St. Helena Public Library, 1492 Library Lane, St. Helena, CA 94574; (2) St. Helena Planning Department, 1572 Railroad Avenue, St. Helena, CA 94574; and (3) on the City's website at www.CityofStHelena.org.

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Comment Letter 84

From: John Milliken <jmzin@comcast.net>
Sent: Tuesday, November 30, 2021 7:41 PM
To: cityclerk <cityclerk@cityofsthelena.org>
Subject: FW: [External] Comments on the DEIR for the Hunter Residential Subdivision Tentative Map Application

Hi Cindy,

I sent this today at 11:54A and discovered that no one got it due to a link to a cloud photo album and an embedded photo.

I am resending this without those and will figure out another way to send the photos tomorrow so that the comment can be included in the DEIR comments.

Please confirm if you got this downsized version.

Thank you in advance.

John Milliken
jmzin@comcast.net
707-963-8134 (Office) 707-486-4266 (Mobile\Text]
1256 Hudson Ave.
St. Helena, CA 94574

From: John Milliken <jmzin@comcast.net>
Sent: Tuesday, November 30, 2021 11:54 AM
To: 'mderosa@cityofsthelena.org' <mderosa@cityofsthelena.org>; 'cityclerk@cityofsthelena.org' <cityclerk@cityofsthelena.org>; 'publiccomment@cityofsthelena.org' <publiccomment@cityofsthelena.org>
Subject: FW: Comments on the DEIR for the Hunter Residential Subdivision Tentative Map Application

November 30th, 2021

FR: John Milliken

1256 Hudson Ave, Saint Helena, CA 94574

Please include my comments and attachments concerning the DEIR for the Hunter Residential Subdivision Tentative Map Application (File no. PL 10-040).

1) Planning and Zoning Code Violations

There is no mention in the DEIR of the project's numerous violations of the St. Helena Zoning Ordinance. All land use decisions must be consistent with a city's general plan and zoning ordinance. *(Collier v. City and County of San Francisco (2007) 151 Cal. App. 4th 1326, 1333, citing Gov. Code 65860, subd. (a)(2); Napa Citizens for Honest Government v. Napa County Bd. of Supervisors (2001) 91 Cal.App.4th 342, 355. See also Land Management v. Contra Costa Bd. of Supervisors (1990) 222 Cal.App.3d 950,957-958 ("issuance of a permit inconsistent with zoning ordinances or the general plan may be set aside and*

84-1

invalidated as ultra vires"[.] The proposed Tentative Subdivision Map and related residential construction violate the St. Helena Zoning Ordinance.

Most of the violations involve non-compliance with the City's Inclusionary Housing Ordinance, Chapter 17.146, as documented by the attached Notification of Final Unresolved Issues and Questions prepared by the City's Building and Planning Director on 2/27/2020. There were no responses from the applicant to this notification mentioned in the DEIR or listed on the Project's Planning Archive. This notification was actually the fourth sent by the City Planning Department for this second attempt at a DEIR. All four document the same Chapter 17.146 violation issues. These same issues were also brought up at the initial Public Scoping Comments Meeting held in April of 2018. With the City and the Applicant well aware of the project's violations of the Inclusionary Housing Ordinance since 2018, it is a mystery as to why these violations were not addressed in the DEIR. Also, per the section in the Municipal Code cited by Contract Planner, Eric Norris, in a letter to the applicant concerning other violations of the Municipal Code: "More on point is the requirement that a map must be denied if it does not comply with the General Plan and Zoning Code. Muni Code (section 16.16.080.D) states, A tentative map shall be denied if any of the following findings are made: 1. That the proposed map is not consistent with the general plan, applicable specific plans, or other applicable provisions of this code. Simply put, the map as presented to the Planning Commission for approval must meet all of the applicable standards of the Zoning Code. No mechanism is available to avoid this requirement."

84-1 Cont.

84-2

2) The DEIR Analysis is based upon an Affordable Housing Proposal that does NOT conform to the City's Municipal Code and fails to account for potential California State Density Bonus and Development Concessions.

Because the applicant has featured "Affordable Housing" as a center piece of this project from day one, it is virtually impossible to prepare an EIR to CEQA standards without having a lawful Affordable Housing Agreement (AHA) in place that details the number, types and distribution of restricted units. As it stands now, the applicant is proposing that: NONE of the 51 Market Rate 4 Bedroom Single Family Homes will be restricted; ALL of the 25 Duets of the restricted housing will be on one lot, and the 11 ADUs will be on 11 of the Market Rate lots (location to be determined). If the City were to accept this legally dubious proposal as is, the project would be eligible for a State Mandated Density Bonus that could trigger development concessions as well as allow for between 30 or 40 more units. So, a legally comprehensive EIR would have to take into account the impacts of these concessions and potentially greater number of units. And, there is also some controversy about whether or not the ADUs that are located on Single Family Lots would qualify for a designation of restricted housing and qualify as units that could be applied to the Density Bonus calculation.

84-3

84-4

Also, since the latest Project Description has an Affordable Component that is violation of the Municipal Code, there may have to be further changes made to the number, types and distribution of the restricted units to bring the project into conformance. All of this speaks to the difficulty of preparing an EIR to CEQA standards where the legality, number, types and distribution of restricted units are a moving target. The City should insist that a legally conforming AHA be formalized and a new DEIR analysis be appended based upon the details of the AHA. To not do so will send this second attempt at an EIR to the same fate as the failed first seven-year effort. The applicant has had 11 years to provide a lawful AHA and the majority of the delay in this EIR can be laid at the feet of the applicant's inability or refusal to do so.

84-5

3) Environmental Diminishment of Taxpayer Funded Conservation Easements and a City Owned "Parklet" lot.

The DEIR makes no mention of how the extension of Adams and the intersection of Adams and Starr will be built upon a state taxpayer funded conservation easement. Additionally, there is a City owned parcel that will be paved over by the extension of Starr that is currently used as a non-motorized access point to the taxpayer funded river trail and levee hiking path. The conservation easements were agreed to by the City in exchange for funds from the Department of Water Resources to be used for the construction of the Flood Project in 2009. The City agreed that the conservation easements were to exist in perpetuity. This would not be the case if a paved road(s), that would accommodate vehicles to access the residential housing proposed by the applicant, were built on the western portion of a conservation easement. This easement is clearly shown a map of the Levee Zone Easement (map attached) by recently prepared by the City to facilitate the transfer of deed to the Napa Valley Land Trust. Not only does this proposed road development on a conservation easement violate the spirit of the DWR agreement, it also threatens the funding from this organization if they find out that an easement has been violated. There is a precedent for having to return a public agency's funding for the flood project. When it was found out the City had used FEMA funding improperly and also double billed FEMA for flood project activities, the City had to return $1.9 million in funds. 84-6 84-7

Attached are comments prepared in 2019 by a resident of St. Helena, Victoria Bradshaw, for the 2040 General Plan Update. These comments detail how the City never included plans for an extension of Adams in any of the funding agreements that provided funds to build the flood control project. None of this was reported in the DEIR. Also, in these comments is a report on the shocking lack of maintenance by the City of the levee (that continues to this day!) that was never built to accommodate a road. Once again, … none of this was mentioned or explored in the DEIR. 84-8

Environmental impacts that come with the diminishment of conservation easements were never addressed by the DEIR. These include: having to walk/ride right next to a trafficked through road lined with parking and housing instead of what is currently open space/vineyard/wild life corridor. The path from the library to the river or atop the levee is an open space jewel that is enjoyed by many residents and visitors. The open space agricultural character of path(s) that are used to walk/exercise pets away from traffic, provided sweeping views of the surrounding mountains, and provide a much-appreciated tax payer funded venue for outdoor exercise and fresh air will literally be paved over. (Please see the attached photo documenting local Starr residents out walking their dog on Thanksgiving Day along the proposed route of the Starr extension.) 84-9

4) Traffic and Public Safety Impacts Not Mentioned in the DEIR.

Although the DEIR claims to have studied the Traffic impacts of the project using the newer VMT standard (that only studies miles traveled by the project's residents), there are quite a few Traffic Impacts that were ignored by the DEIR. Also, the DEIR failed to study the impacts on Public Safety by ignoring the potential problems with evacuation routes created by the project, be it for flood or fire. 84-10

Other traffic impacts not mentioned in the DEIR include:

a) An increase in pass through traffic through surrounding residential neighborhoods by drivers looking to avoid congestion on Main Street (Highway 29) by crossing between the Silverado Trail and Main 84-11

Street. Taking highway traffic off the highways and routing it through residential neighborhoods is insane. However, this is what will happen with the advent of apps like Waze or Google Maps, that will direct drivers to go through residential neighborhoods to save just a few minutes of driving time if new connector streets (Adams and Starr) are built. Once again, ...none of this was studied or identified in the DEIR.

84-11 Cont.

b) Residents of Hunt's Grove and surrounding neighborhood will have to navigate and intersection with cross traffic (Hunt and Starr) to walk/drive to schools, shopping, etc. Simply put, there will be a lot more traffic on Starr if a connection is made to an Adams Street extension. Once again, ...none of the impacts of this new intersection on the safety of residents was identified in the DEIR.

84-12

c) Overflow parking from Hunt's Grove is already a problem on Starr and the surrounding neighborhood. These problems will be exacerbated by the new development from all the higher density development allowed on Lot 52. In addition, whoever develops Lot 52 can request a parking concession from the Density Bonus program that will allow fewer off-road parking spaces to be provided. Once again, ...none of the impacts on increased demand for limited parking spaces was identified in the DEIR.

84-13

d) Evacuation routes from Vineyard Valley and the surrounding neighborhood could be impacted by the additional pressures from the proposed development. Not only will residents in Vineyard Valley be evacuated, all the residents of the project will be using the same evacuation routes. This could turn the evacuation into a Public Safety failure. Once again, ...this was not studied or identified in the DEIR.

84-14

5) Public Safety Hazards Concerning the Lack of and Maintenance of the Flood Project and the Construction of the Levee

The aforementioned Comments prepared by Victoria Bradshaw in 2019 for the 2040 GP document the lack of maintenance of the Flood Project since its construction in 2010 and also how the levee was never intended to be used as a road bed. These two conditions result in a heightened degree of the chances for catastrophic levee/flood wall failure that could result in a loss of lives and property for residential development on a flood plain behind a compromised levee/flood wall. This is the opposite of risk management and it was never mentioned in the DEIR.

84-15

Here is a link to a cloud photo album that documents the construction and (lack of) maintenance from the time the levee/flood wall was started in 2009 to just last Thanksgiving Day:

As you can see, the rodent damage over the years is quite extensive. The rodent damage is most extensive at the base of the W flood wall as well as where the wall meets the levee. This is the area that would be most impacted by hydraulic forces in a major flood event. Perhaps even more disturbing are the levee inspection reports obtained from the City dating from 12/6/2019 – 7/7/2021. They state for Item 10 Animal Control, there is an Acceptable Rating ("Continuous animal burrow control program in place that includes the elimination of active burrowing and the filling in of existing burrows.") Based on the photos, the rating should be Unacceptable ("Animal burrow control is not effective or is nonexistent. Significant maintenance is required to fill existing burrows, and the levee will not provide reliable flood protection until this maintenance is complete.")

84-16

Additionally, since the City could be liable for levee/flood wall failure, the impact to the finances of the City and its ability to provide services to the community could also be at risk.

84-17

Response to Letter 84
John Milliken
November 30, 2021

84-1 The comment states an opinion that the Draft EIR does not indicate how the Project violates or is inconsistent with the City's Zoning Ordinance and asserts that there are numerous violations of the City's Zoning Ordinance and identifies non-compliance with the City's Inclusionary Housing Ordinance because correspondence from the City to the Project applicant regarding compliance concerns were not addressed.

The commentor is correct that the City's Inclusionary Housing Ordinance would require the Project provide a minimum level of affordability. The Project applicant's proposal to meet this requirement is part of a subsequent discretionary approval (Affordable Housing Agreement) which must be approved before development can occur, as noted on page 2-32 of the Draft EIR. Staff will review the applicant's proposal before making a recommendation to the City Council on the Affordable Housing Agreement; until that application is submitted, and the agreement approved by City Council, no development can occur on the site. Please also see page 2-18 of the Draft EIR which lists all the subsequent discretionary action approvals needed before development may occur and explains a final Affordable Housing agreement approved by the City Council would be required prior to recordation of a final subdivision map.

The letter to the applicant (dated April 13, 2021) which is noted by the commenter was responding to the applicant's suggestion that alternatives were available to address inconsistencies between the proposed tentative map as it existed at the time and the standards of the St. Helena Zoning Code. The map has since been revised, as shown in the Draft EIR and based on staff's review and consultation with the City Attorney, conforms with the requirements of the City's Zoning Code and the Subdivision Map Act.

84-2 The comment asserts that the Tentative Subdivision Map is to be denied if it is not consistent with the City's General Plan and any other relevant planning documents.

The commenter is correct. The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR is inadequate; therefore, no further response is required. Please see also Response to Comment 114-8.

84-3 The comment states an opinion that the Project is required to include an Affordable Housing Agreement and therefore it is not possible to prepare an EIR absent this agreement and notes the Project currently does not include an Affordable Housing Agreement which would make the Project eligible for a state mandated density bonus.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see also Response to Comment 84-1 that addresses the Affordable Housing Agreement.

84-4 The comment refers to the need for the EIR to evaluate any increase in units attributed to a density bonus, including how the accessory dwelling units (ADUs) would be defined.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see also Response to Comment 84-1 that addresses the Affordable Housing Agreement. As discussed in Response to Comment 84-4, a future density bonus request, including changes to development standards, would be made as part of the Use Permit approval process for the attached housing units, which would be subject to CEQA review.

84-5 The comment emphasizes that, in the commenter's opinion, because an Affordable Housing Agreement is not considered part of the Project, the Project violates the City's Municipal Code and would result in further changes to the number, types and distribution of units to comply with the City's affordable housing requirements. The comment requests that the City require the applicant to provide an Affordable Housing Agreement that is analyzed in this EIR.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Responses to Comments 84-3 and 84-4 that address the Affordable Housing Agreement requirement.

84-6 The comment refers to a conservation easement and implies that the extension of Adams Street and the intersection of Adams Street and Starr Avenue would be within this easement. The comment goes on to state that a City-owned parcel currently used to enable access to the walking path/trail and the separate levee maintenance road would be paved over by the extension of Starr Avenue.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. The City has confirmed that the easement noted by the commenter does not include any part of the Project site and would not be affected by the Project. The Proposed Project improvements would not remove the existing levee trail and would not prohibit access to the trail.

84-7 The comment refers to the City's Flood Protection Project and asserts that an issue exists associated with misuse of funds.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Master Response 3 for additional information on the Napa River levee.

84-8 The comment refers to comments submitted by another resident on the 2040 General Plan Update project specific to the extension of Adams Street and asserts that the City did not include the extension of Adams Street as part of the Flood Control Project, which was not discussed in the Draft EIR. The comment goes on to state an opinion that there is a lack of City maintenance of the levee and that the levee was never built to accommodate a road.

Comments specific to the 2040 General Plan Update are not relevant to addressing the accuracy or adequacy of the Hunter Subdivision Project; therefore, no response is required. Please see Master Response 3 that addresses concerns associated with the levee including maintenance.

84-9 The comment refers to the conservation easement and the change in character for people accessing the trail with residences proposed adjacent to a portion of the trail.

The change in visual character for people accessing the trail is addressed in detail in Section 3.1, Aesthetics/Visual Resources. As explained on page 3.1-27, the public trail that borders the north/northwest boundary of the site also provides public views of the site. The Project would modify long-range views of existing vineyards located to the west and on the Project site as well as views of rolling hillsides which would be partially blocked by development of new residences. The City has not identified this area for protection of public views.

Please see Response to Comment 84-6 for information regarding the conservation easement and a trails map included in Chapter 3, Changes to the Draft EIR that shows trails adjacent to the Project site.

84-10 The comment asserts that the Draft EIR evaluated the Project's increase in vehicle miles traveled (VMT) but did not address other traffic impacts and also did not address public safety concerns associated with evacuation in the event of an emergency.

The Draft EIR evaluates impacts associated with an increase in VMT. The comment does not specify what traffic impacts were not addressed; therefore, no response is required. Please see Master Response 1 that addresses concerns regarding evacuation in the event of an emergency.

84-11 The comment states an opinion that the Draft EIR does not address pass through traffic by those drivers seeking to avoid congestion on Main Street.

Please see Response to Comment 84-10. These types of transportation operational issues are not required to be evaluated in an EIR.

84-12 The comment discusses what the commenter projects will be an increase in traffic for neighboring areas to navigate with the new intersection of Hunt Avenue and Starr Avenue and the increase in traffic on Starr Avenue.

Please see Response to Comment 84-10.

84-13 The comment addresses existing parking concerns that the commenter feels exist on Starr Avenue, asserts that these existing parking issues will be exacerbated with the Project, and states the multi-family component can request a parking concession that will reduce the amount of parking to be provided.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required.

As noted in Response to Comment 84-4, the Project applicant is not requesting a density bonus as part of the Project.

84-14 The commenter asserts that evacuation routes for Vineyard Valley and surrounding areas could be impacted by the Project resulting in a public safety failure.

Please see Master Response 1 that addresses concerns regarding emergency evacuation.

84-15 The comment asserts that the City has not been maintaining the levee and the levee was never designed or intended to be used for a road, which could contribute to failure of the levee and goes on to claim this contributes to a compromised levee/floodwall.

Please see Response to Comment 73-5. Please see also Master Response 3 that addresses concerns associated with the levee.

84-16 The comment states an opinion that rodent damage has compromised the integrity of the levee and questions the City's maintenance records relative to rodent issues.

The manner in which inspection and maintenance responsibilities for the existing levee are assigned are not environmental effects related to the Proposed Project. Furthermore, under CEQA, the effects of the environment upon the project are not "impacts." Rather, CEQA requires the lead agency to consider the ways in which the project effects the environment. Please see Master Response 3 that addresses the maintenance, design and stability of the levee.

84-17 The comment claims that the City would be liable in the event of a levee failure resulting in a loss of City funds to provide services to City residents.

Legal liability for a potential future event is not within the scope of CEQA review. The comment does not identify specific issues regarding the adequacy or accuracy of the Draft EIR; therefore, no further response is required. Please see Response to Comment 73-5.

An attachment to this letter can be found in Appoendix B.

Comment Letter 85

November 29, 2021

To: Planning Commission, City of St. Helena

From: Michael Mills, 1380 Grove Court, St. Helena

Re: Hunter Subdivision Project

Does the draft Environmental Impact Report (the "Draft") completely and correctly set forth all "potential significant environmental effects" so the Planning Commission, the City Council, and the community can accurately and fairly evaluate the Hunter Subdivision Project (the "Project")?

No.

As documented in the many informed, detailed, and precise comments submitted, the Draft is deficient in many respects, most egregiously as to geology and soils and hydrology and water quality.

I join in those comments. However, this comment is limited to two apparently minor but in fact significant aspects of transportation and circulation.

The Draft concludes that the project will have a "significant and unavoidable impact" on Vehicle Miles Traveled (VMT, the statistical proxy for traffic) for which "there are no feasible mitigation measures available." (Page 3.14-41)

I agree with that conclusion. It might well be even stronger if VMT were calculated not on the basis of generic assumptions—as to the number of residents per unit and the number of vehicles per unit—but instead on the basis of actual data from St. Helena. Compare the Draft's assumptions to data from City-Data.com, https://www.city-data.com/zips/94574.html, which shows a significant fraction of both owner- and renter-occupied units having three or four vehicles per unit.

Nonetheless, the Project's consultants object even to the light VMT numbers the City calculated, complaining that the assumptions used should have been more generous to the Project. (Page 158, Agenda Packet Amended 11/23/21) To justify dismissing the "significant and unavoidable impact" found by the City, the consultants wrap their argument in an environmental cloak. Climate change

85-1

85-2

85-3

Page 1 of 2

analyses are based on regional VMT, so local traffic analyses should be too. The argument is sophistry, not statistics. 85-3 Cont.

A neighborhood walk confirms that Hunts Grove and Monte Vista Court parking spaces are insufficient, so residents park on Starr, Hunt, Meadowcreek, and Grove Court. In effect, the owners of those housing units have shifted the cost of providing parking to City taxpayers, who pay for street construction and maintenance, without compensation to the City. Those owners also shift burdens to houses nearby—air pollution, noise, and traffic. 85-4

The Draft accepts without analysis the proponents' statements as to parking.

The Draft is also deficient in providing adequately detailed and complete maps. The "proposed tentative map," Figure 2-4, is drawn at large scale without any indication of key features, particularly in Lot 52. Statements about vineyard preservation, planting strips, sidewalks and other features within and adjacent to the Project are material to evaluating it, but cannot be evaluated based on the Draft. 85-5

Response to Letter 85
Michael Mills
November 29, 2021

85-1 The comment states an opinion the Draft EIR does not accurately or fairly evaluate the Project's potential significant environmental effects, specifically regarding the topics of geology, soils, hydrology, and water quality.

The commenter's opinion is noted and forwarded to the decision -makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. However, potential Project impacts to geology and soils are addressed in Section 3.6, Geology and Soils; and potential impacts to hydrology and water quality are addressed in Section 3.9, Hydrology and Water Quality.

85-2 The comment agrees with the Draft EIR's VMT analysis conclusion of a significant and unavoidable impact. The comment goes on to suggest using vehicle ownership data for city residents to estimate the Project's VMT rather than values from the travel demand model.

The comment does not identify specific issues regarding the adequacy or accuracy of the Draft EIR; therefore, no further response is required. Please see Response to Comment 98-3 regarding VMT.

85-3 The comment disagrees with the consultant's (W-Trans) opinion provided in the peer review of the Project's VMT analysis that the significant and unavoidable impact determination by the City is conservative.

This is a closing comment that does not raise a significant issue regarding the adequacy or accuracy of the Draft EIR; therefore, no further response is required.

85-4 The comment states an opinion that parking in the area is insufficient and that neighborhood homeowners have trouble finding parking.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required.

85-5 The comment states an opinion that maps provided in the Draft EIR are deficient and lack information necessary to understand the Project, but notes specific problems with Figure 2-4 only.

Figure 2-4, referenced in the comment, shows the Project's proposed Tentative Subdivision Map. The level of detail requested by the commenter is not detail

provided on a tentative map. Information necessary to evaluate the proposed Tentative Subdivision map in the Draft EIR is adequate to evaluate potential Project impacts.

C

Comment Letter 86

-----Original Message-----
From: Doris Mosler <dhmosler@gmail.com>
Sent: Saturday, October 30, 2021 9:30 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Development

As a senior living in vineyard valley I am deeply opposed to the development of the area behind the library. This is too small a town to support a massive housing project. The disturbances while building will be terrible and noisy, the traffic impacts intense and the loss of a lovely natural resource and bird habitat a great loss.
Please do what you can to stop this unwise plan.
Doris Mosler

86-1

Sent from my iPhone

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Response to Letter 86
Doris Mosler
October 30, 2021

86-1 The commenter opposes the Project, claiming that the City is too small to support the Project and expresses general concerns related to noise, traffic, and bird habitat.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 87

From: Janell Myhre <janellrae@gmail.com>
Sent: Tuesday, November 30, 2021 6:40 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Vineyard Valley MHP <vineyardvalleymhp@gmail.com>
Subject: Fwd: [External] Vineyard Valley Shared Response - Hunter Project Draft EIR (DEIR)

Hello Maya,

I am writing as a resident of Vineyard Valley. I wholeheartedly support the shared response summarized below and attached. I understand this was submitted to the city and I want to make sure to add my name to the concerns listed in the response. My experience working in the area of emergency management for county governments including County Executive Offices, as well as Fire and Sheriff's departments, in four Bay Area counties (San Francisco, Santa Clara, Marin, Solano) has me very concerned about this development. 87-1

The ramifications of the lack of infrastructure mentioned in the Vineyard Valley Shared Response has far-reaching, negative impacts to the public health and safety of the Vineyard Valley and St Helena communities. Additionally, this development will literally eliminate a critical evacuation route for Vineyard Valley's residents, all of whom are of senior age and need quick access to exit routes. With the current catastrophic fire behavior that is becoming common to Napa, St Helena, and the North Bay area, this housing development poses dangerous ramifications to me and my neighbors. 87-2 87-3

As a resident of St Helena and Vineyard Valley, I appreciate you taking the attached Shared Response into consideration and doing what you can to stop the Hunter Subdivsion Project. If there is a need for addtional housing, I ask that you look into other options without such public health and safety implications. 87-4

Respectfully,

Janell Myhre

23 San Lucas Ct, St Helena, CA

Vineyard Valley Shared Response

This submission by Vineyard Valley is very specific to 3 areas of concern. The requested responses to the DEIR is to be prescriptive and specific to the DEIR. I know as we have gone through this process that there are **numerous issues** related to this project that concern us and many in St Helena. Again we have taken a very specific direction and focused on 3 of the many topics. With this in mind we submit these comments which are limited to the inadequacies perceived by us in the areas of 87-5

1.**transportation** (traffic impacts),

2.utilities, especially serious wastewater problems based on past experience, and

3.emergency evacuation (with fairly quick evacuation from Vineyard Valley in the current environment can be no small challenge)

A greater description and commentary is included in the attachment below.

87-5 Cont.

Public Comment on Draft EIR for the Hunter Subdivision Project
11/17/2021

These comments are submitted by the ownership and supported by the community of Vineyard Valley. It is beyond dispute that our community will be directly and significantly impacted by the Hunter Project. With this in mind we submit these comments which are limited to the inadequacies perceived by us in the areas of **transportation** (traffic impacts), **utilities**, especially serious wastewater problems based on past experience, and **emergency evacuation** (with fairly quick evacuation from Vineyard Valley in the current environment can be no small challenge.

Our comments relate solely to our reading of the adequacy of the Draft EIR regarding: Transportation and Circulation, Utilities and Service Systems and Omission of Emergency Evacuation

1. Transportation and Circulation

Draft EIR page 3.14-41 presents Table 3.14-3 which provides a Proposed Project VMT Summary. It is clear from the table the Proposed Project Transportation Demand Management (TDM) strategies would result in a Project VMT to be 15.2 % higher than the City wide VMT per capita.

The conclusion under the heading ***Mitigation Measures*** states because there are no feasible mitigation measures available to substantially reduce or lessen the impact of the Proposed Project to less than significant..... **the impact is a significant and unavoidable impact.**

Draft EIR concludes and clearly states that the Proposed Project has a significant and unavoidable impact.
It is our opinion that City Planning and Council has an obligation to the citizens of St Helena to protect their environmental integrity and respect the well substantiated conclusion of the Draft EIR; There is no legitimate basis for overriding such a clear unavoidable impact as stated in the Draft EIR.

2. Utilities and Service Systems

Draft EIR page 2-29 section entitled Sewer System states that wastewater flows will discharge from two locations on the proposed project site. The western end of the site is proposed to drain into an existing manhole at the corner of Starr and Hunt avenue.
The area **east of Starr avenue,** is proposed to drain east through the project site via new 8-inch sewer pipes through lot 21 within a public easement manhole on the adjacent parcel in the **Vineyard Valley Home Park.** The number of homes served on the eastern end of the project would number 46 and result based on estimates in the Draft EIR by RSA+, a civil engineering firm calculates approximately **13,000 gallons** of new discharge to the existing manhole per day taking into account the proportion of 46 homes to the Project 51 homes.

87-5
Cont.

The manhole on Vineyard Valley property connects to a sewer pipe that runs under Paseo Drive which is the central through fair in the Park. This pipe delivers the wastewater to a pipeline system ending up at the city wastewater facility.
The pipe is part of a wastewater siphon system that is owned and maintained by the City. The siphon was installed most likely because the discharge pipe has to cross Sulphur Creek. These systems **are well known to present problems in communities around the country** (EPA newsletter March 2015: "Inverted siphons carry wastewater flows under rivers, canals, road, etc. These structures can present problems, and communities look for ways to avoid siphons in their collection system when possible.") and here in Vineyard Valley we have had our share of problems over the years from backups of water and waste products from a city manhole located on Paseo during heavy rains. The result is a public health issue for our residents when spills occur. The city is fully aware of these issues since we call them to mitigate when they occur.

Additional wastewater flows projected from the Project are health and safety issues for the residents of Vineyard Valley.

The Draft EIR has not addressed this issue of sewage spilling in the streets of Vineyard Valley.

Further, after reviewing the estimates in the Water Neutral Report Volume III Appendix J prepared by RSA+ we believe the wastewater estimates could be as low by 50 to 100 %, thus: even making things worse. Also, we do not see estimates of wastewater from the **11 ancillary units**

The reason we disagree with the estimates in the EIR is the assumption of 35 gallons per occupant per day of residential wastewater discharge does not even come close to historical St Helena water usage as described in a 2016 Water and Wastewater study which ranges from 65 to 80 gallons per day (excluding landscaping) depending on assumptions of occupants per residential account.

In addition, currently Phase 2 of the City's water shortage emergency program calls for residents to limit non landscaping use to 65 gallons per day. How can 35 gallons per day be a reasonable assumption based on past practices. Why should the City in this time of water shortage consider this assumption of water use as reasonable?
We believe that the Draft EIR is wrong on the estimates of water use as calculated by RSA+

In summary, the Draft EIR does not address the public health and safety issue of increased flows and an inadequate sewage delivery system resulting in sewerage spilling into the streets of Vineyard Valley.
We believe the Draft EIR is wrong on the estimates of water use as calculated by RSA+

Sewage spills in Vineyard Valley have been documented in the past with vastly lower wastewater flows than the unrealistic estimates in the Draft EIR.

87-5
Cont.

3. Emergency Evacuation

During a Wildfire Fire emergency or any other major event in order to quickly and safely evacuate residents we need the two designated exits to be available and viable. These exits are Paseo Drive to Pope street and Paseo Drive connected to Adams street (or extended)
We believe the Hunter Project Development will seriously impact the adequacy of the Adams street evacuation plans, with the CEQA requirements not adequately addressed in the Draft EIR.

1. CEQA IX Hazardous and Hazardous Materials. Would the Project:
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
The issue of emergency evacuation in the event of a significant Hazardous waste spill event in Vineyard Valley is not covered in the Draft EIR

2. CEQA XVII Transportation Would the project: **d) Result in inadequate emergency access?**

We have not seen this topic covered in the draft EIR and we are very concerned that emergency access will be greatly diminished by the Hunter Project development.

3. CEQA XX Wildfire. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:
a) Substantially impair an adopted emergency response plan or emergency evacuation plan.

We believe the Hunter Project Development would impair our evacuation Plan and this has not been addressed adequately in the Draft EIR

The Draft EIR has failed to adequately address CEQA requirements related to section IX Hazards and Hazardous Materials f) section XVII Transportation d), and section XX Wildfire a)

We believe the implementation of the Hunter project puts the park residents in harms way in an emergency evacuation event.

87-5
Cont.

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Response to Letter 87
Janell Myhre
November 30, 2021

87-1 The comment states opposition to the Project, supports the claims listed in the letter from Vineyard Valley residents (Comment Letter 111), and wishes to be added to that letter. The comment also states the commenter's experience working in emergency management.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

87-2 The comment references Comment Letter 111 and asserts that the Project would negatively impact the Vineyard Valley community due to lack of infrastructure.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Master Response 4 that addresses wastewater infrastructure concerns.

87-3 The comment states an opinion the Project would eliminate evacuation routes for Vineyard Valley residents which would be dangerous in the event of an emergency.

Please see Master Response 1 that addresses concerns associated with emergency evacuation.

87-4 The comment requests that City staff explore other options to develop affordable housing.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

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Comment Letter 88

Attention: Planning Commission
From: Timothy Nieman, St. Helena

Comments for Hunter Subdivision DEIR

Comment about Use of Well for Irrigation

Page 3.9-43 states "Therefore, the well would draw from the deeper volcanic aquifer, below the Napa Valley alluvium which is considered hydraulicly connected to the Napa River (Appendix L). Therefore, the proposed pumping from this well is not likely to have any direct effect on surface flow in the Napa River." Appendix L then states "The well intercepts groundwater from rocks and deposits of volcanic origin. Well perforations begin at a depth of 80 ft below ground surface and extend to the bottom of the well 410 below ground surface. A 20 ft well seal is in place. The well does not draw water directly from the Napa Valley alluvium, which is believed to be interconnected with surface water of the Napa River. The degree of hydrogeologic connectivity between the underlying volcanic aquifer and the alluvial deposits on the surface of the Napa Valley Floor has not been quantified, but it is likely that withdrawals of groundwater from this deeper aquifer have a less direct effect on surface flow in the Napa River than withdrawals from the shallow alluvial aquifer." 88-1

As a geophysicist, I find this to be appallingly bad science and also bad logic. At best, the authors should simply state they don't know if the volcanic rocks are connected to the Napa River.

The authors state in Appendix L that the connectivity to the Napa River of the aquifer being tapped has not been quantified. The authors then conjecture, without data, that it might have a "less direct effect" on surface flow in the Napa River than a horizon known to be connected to the river. From this basis, they somehow conclude on page 3.9-43 that the proposed pumping from this well is not likely to have "any direct effect" on surface flow in the Napa River. So, they began with a statement that the connectivity has not been quantified (i.e., nobody knows) and then conclude that pumping will not have any direct effect on surface flow. That statement has no basis of support. They offer no data at all about the geologic column or about depositional units, if any, that exist between the shallow Napa Valley alluvium and the underlying volcanic aquifer. 88-2

The Napa River is a gaining river in this area and may well be connected to the aquifer from which the applicant plans to withdraw 5.6 million gallons of water per year. It is certainly not acceptable to approve the use of the well for irrigation at this time and until the aquifer's connectivity has been verified with subsurface data or other reliable hydrogeologic data. Further, the County's Groundwater Sustainability Agency is addressing the issue of groundwater withdrawals and will issue findings in 2022, followed by review by the State Department of Water Resources. Because the issue of connectivity is not known and the issue of groundwater withdrawals in this area is not resolved, this should be changed to an impact that is significant and unavoidable based on the data available at this time. 88-3

Comment about Levee Safety

Page 3.9-7 states "Based on the levee design, the Project site would be subject to a flood exceeding a 200-year recurrence interval, equivalent to less than a 0.5% annual chance. During such a flood (200 88-4

year), the style of flooding onsite would be slow and gradual, since the high velocity flows remain limited to the regulatory floodway."

The type of flooding referenced here is an overtopping event. The conclusion that such an event would be slow and gradual is absurd. An overtopping event would fill the area behind the levee rapidly as soon as the water goes over the levee, much as an empty bowl in a sink will fill rapidly once the water in the sink rises above its rim. The area behind the levee is the equivalent of the bowl in the sink. If anything, this type of flooding would be quick and catastrophic. "Overtopping of levees produces fast-flowing, turbulent water velocities on the landward-side slope that can damage the levee." (*Hydraulics of Levee Overtopping*, Li, Lin et al, CRC Press, 2021). "During a flood event, the risk of a levee overtopping can be significant and the consequences can be catastrophic." (National Research Council 2013. *Levees and the National Flood Insurance Program: Improving Policies and Practices*. Washington, DC: The National Academies Press. https://doi.org/10.17226/18309., pg. 100).

88-4 Cont.

Building behind a levee is never safe. The Association of State FloodPlain Managers states, "Because of the nature of levee failure flooding, the ASFPM believes that levees are not a wise community choice and should never be used to protect undeveloped land so development can occur in the flood risk area behind the levee." (*National Flood Policy Challenges, Levees: The Double-edged Sword,* Association of State FloodPlain Managers, 2007, *www.floods.org).*

88-5

Comment about Levee Maintenance

Page 3.9-8 states "Specifically, levee maintenance consists of bi-annual (spring & fall) levee side mowing and levee embankment inspection prior to the rainy season, immediately following a high-water event, and **at intervals not exceeding three months** (City of St. Helena 2012). The purpose of the inspections are to verify that no unusual settlement or loss of material is occurring, that there are no areas of seepage or boils, that **no animal burrows are encroaching upon the levee section**, that toe drainage ditches are flowing properly, and that access roads are properly maintained and are graded to drain."

88-6

Putting homes behind a levee is a bad idea, but at a minimum, requires the absolute assurance of levee integrity. Please include City of St. Helena records to show that required levee bank inspections and related maintenance have been conducted at least once every three months since the construction of the levee.

88-7

There are countless gopher holes all over the levee. Please provide verification that the animal burrows were identified during regular maintenance, what measures were taken to map their surface and subsurface extent, and how the problem was addressed. The following pictures were taken during the storm in January 2017, the first picture shows relative location and the second a closeup of just a few of the easily recognizable burrows on the upper edge of the levee.

88-8

Comment about Earthquakes

Page 3.6-12 states "The 1906 and 1969 earthquakes were of moderate magnitude with earthquake epicenters located near downtown Santa Rosa." The 1906 earthquake was not of moderate magnitude nor was its epicenter near Santa Rosa.

88-9

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Response to Letter 88
Timothy Nieman

88-1 The comment states an opinion that the conclusions in the peer-reviewed well capacity and sustainability analysis include "... appallingly bad science and also bad logic …" and should be revised to state the what the commenter asserts are uncertainties in the study about local geology and hydrology.

The conclusion of the independent analysis prepared by a California licensed and certified Engineering Geologist is that use of the on-site well and pumping from the deeper volcanic aquifer would have less of an effect on the Napa River than withdrawals from the shallow alluvial aquifer. The language on page 3.9-43 of the Draft EIR has been revised to follow the language of the report more closely. Please see Chapter 3, Changes to the Draft EIR for the revised language.

The findings of the independent analysis as well as the proposed volume of pumping support a the EIR's finding of a less-than-significant impact.

88-2 The comment states an opinion that the finding of less than significant related to the effects of using the onsite well for irrigation use is unsupported.

As stated above in Response to Comment 88-1, the conclusion related to the effects of the proposed onsite well use is based on the professional opinion of a California licensed and certified Engineering Geologist, the known details of the well screening exhibited in Appendix L of the Draft EIR, the relative volume of pumping proposed for the Project's irrigation purposes, and the direct observations of the well capacity test that was performed onsite. The Well Capacity report (DEIR Appendix L) also includes the recorded stratigraphy that was part of the well completion report that was completed at the time of well construction (Attachment C of Appendix L) that does offer data on the underlying geologic units at the site.

88-3 The comment states an opinion that approval of the well (to provide water for landscape irrigation) is not acceptable until more hydrogeologic data is obtained and the County's Groundwater Sustainability Agency issues its findings and the potential impact be changed to significant and unavoidable.

Please see Response to Comment 88-2.

88-4 The commenter takes issue with levee safety and the description in the Draft EIR of an overtopping event as something that would be slow and gradual.

To avoid confusion, the sentence that refers to the flooding as slow and gradual has been removed from the document, as shown in Chapter 3, Changes to the Draft EIR.

See also Master Response 3 for more information related to the levee and flood protection.

88-5 The comment includes a quote from the Association of State Floodplain Managers which states that levees should not be used to protect undeveloped land so that development can occur.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Master Response 3 regarding the levee.

88-6 The comment references the levee maintenance procedure described in the Draft EIR.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. please see Master Response 3 regarding the levee.

88-7 The comment requests documentation showing that levee bank inspection and related maintenance have been conducted as least once every three months.

Please see Responses to Comments 75-1, 73-5 and Master Response 3.

88-8 The comment requests documentation regarding the identification and management of animal burrows at the levee.

Please see Responses to Comments 75-1 and 73-5 and Master Response 3.

88-9 The comment concerns a statement made about the location of the epicenter of the 1906 earthquake.

To clarify, the text has been edited on page 3.6-12 of the Draft EIR to correct the description of the 1906 earthquake and is included in Chapter 3, Changes to the Draft EIR.

Comment Letter 89

Via E-Mail to:

publiccomment@cityofsthelena.org
mderosa@cityofsthelena.org

November 22, 2022

Planning Commissioners
Mayor of St. Helena
St. Helena City Council
c/o Planning Department
1572 Railroad Avenue
St. Helena, CA 94574

Re: Concerned Citizens Against Hunter Subdivision Project
Comment Letter to Draft Environmental Impact Report SCH # 2018032014

Honorable Mayor, City Council Members and Planning Commissioners:

I am a resident at Vineyard Valley, a senior retirement community in St. Helena, immediately to the west of the proposed Hunter Subdivision Project (the "Project"). I am also an attorney with an expertise in land use and the California Environmental Quality Act ("CEQA"). This letter is submitted in my individual capacity and on behalf of others in the community and not as legal counsel for Vineyard Valley ownership, which has submitted its own comment letter in opposition to the Project. 89-1

Our entire Vineyard Valley community is united against this project as it has been proposed by the developer. The Environmental Impact report is inadequate and has no significant discussion of Vineyard Valley and the development's impacts on the senior citizens residing here. We are a population of sensitive receptors that is particularly sensitive to impacts from noise, glare and traffic and are extremely dependent upon the open space that will be eliminated by this project. 89-2

I am especially concerned about the lack of analysis of the impact to the existing walking path, which goes directly from Vineyard Valley into downtown St. Helena via Adams street. Many of us use this trail on a daily basis to maintain our physical strength and enjoy the scenic and natural beauty of St. Helena. The path, which currently borders pristine open space and vineyards, will soon front along backyards and fences under the developer's proposal, diminishing our quality of life by eliminated open space and the cultural and social environment created by our community trail. One need to look no further than Visual Simulation 3 on Figure 3.1-9 to see how profoundly walkers on the community trail would be impacted by this project. The loss of green space will also significantly impact our property values, which although not a CEQA impact, is within the purview of the City to consider in disapproving the Project. 89-3 89-4

It also appears that the Project would cut off the community trail at Star Avenue, essentially reducing the trail length by 40%, eliminating the prescriptive easement for the benefit of the public over any private land. The DEIR consciously diminishes the significance of this important community assest by referring to it as a "maintenance road". Eg See DEIR 2-23: "The southwestern portion of the existing gravel maintenance road at the end of Adam's Street would be **modified** by the Proposed Project to enable access to the Project site." What the DEIR glosses over is that this reference to 'modifying' 89-5

1

Adams is in fact extending Adams Street, which will now end at Star and the "modification' will in fact result in the elimination of approximately 40% of the existing trail.

89-5 Cont.

To be clear, we are not opposed to the development of this property. Our issue is merely how it has been proposed--without any regard to the Vineyard Valley senior community or input from our residents. There are a number of project mitigations discussed below not considered in the DEIR that would have improved the project and gained our support.

89-6

1. Comments to DEIR

A. Piecemealing of Project Approvals.

The Applicant concedes that additional entitlements will be required for the Project, including entitlements of significance to the community such as an Affordable Housing Agreement, design review and most importantly, a Conditional Use Permit ("CUP") for a large, undeveloped portion of the Project with a possible density bonus in the future that is not included here. All of these entitlements are related to and arise from the Project, hence, to limit the application of the DEIR to just the Subdivision Map Act approval eliminates many areas of potential controversy, impacts of significance and a plethora of political and social issues that the City and community is not afforded an opportunity to evaluate holistically. CEQA defines a project as "the whole of the action" [Guideline 15378a, Eg. See *Bozung v. Local Agency Formation Commission (1975)* 13 Cal. 3rd 263).] Similarly, in *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal. 3rd 376) the California Supreme Court held that related approvals had to be evaluated in the CEQA document when they were "reasonably foreseeable".

89-7

The segmenting of the Project is by the applicant's own admission as the DEIR states: "Beyond the Tentative Subdivision Map application before the City at this time, the Proposed Project applicant has stated their intent to ultimately develop the 51 lots with 51 single-family, market-rate residences. Additionally, homes on 11 of the 51 lots would be developed with an ADU as part of their initial construction." [DEIR 2-14] These are significant foreseeable entitlements and the failure of the application to include these is material and requires resubmittal and recirculation of the DEIR. The required 'direct environmental impacts analysis' and the 'indirect effects analysis' of these omitted entitlements should have been the subject of disclosure and public debate.

89-8

The DEIR authors acknowledge that "the MR district also allows attached duplex and triplex units, condominiums, and townhouses, and similar uses **with a conditional use permit.**" [DEIR 2-13]. By ducking the CUP approval for the apartments, townhouses and other more controversial and less profitable Lot 52 multifamily uses, applicant's strategy is to push the CUP and the more controversial aspects of the project off to a future date. The developer's cynical goal is to get city council approval for the more profitable, high end single family residences and leave the 3.4-acre parcel with 25 attached multifamily residential units in indefinite limbo. This effort to cherry pick the profitable portion of its Project and defer the less profitable phases violates CEQA's anti piecemealing rule. In the future, the developer can submit an application for a revised 'concept plan' that includes less density or more density, or even possibly converting this 'house money' phase back to single family. At that time, the developer can request an EIR addendum from the City as a litigation defense for the CUP, a much lower legal hurdle. The developer's transparent strategy is to frame the Project as a simple tentative map approval and

89-9

2

avoid public dialogue around many of the details surrounding the Project as a whole that might sway the decisionmakers into an unfavorable verdict.

89-9 Cont.

B. Project Description—Community Walking Trail

The Project Description makes light of the community walking trail used by residents throughout the community, specifically the senior citizens living at Vineyard Valley, the northerly terminus of the "gravel maintenance road". This important community amenity is referred to a "a gravel maintenance road used by the public as an informal trail [that] borders the site along the north/northwest boundary . . ." This dismissive description in turn leads to an inadequate discussion on the importance of the community trail and the impacts of the project on its use, maintenance and quality as an open greenspace--despite the authors conceding nonchalantly that "the existing gravel maintenance road . . . is a popular walking trail for City residents". In addition to eliminating a substantial portion of the community walking trial by extending Adams to Star, both sides of the extended street would now include parking.

89-10

89-11

C. Project Objectives

The DEIR correctly states that the purpose of the Project Objectives is to "help the lead agency determine the alternatives to evaluate in the EIR (CEQA Guidelines, Section 15124(a))" [DEIR 2-13] However, the authors fail to acknowledge that the Hunter DEIR Project Objectives are solely the applicant's project objectives and are not the objectives of the City of St. Helena as the Lead Agency. As commenters have noted: "The statement of project objectives is supposed to represent those of the Lead Agency. Sometimes a private project applicant will have his or her own objectives that are not necessarily the same as the lead agency's. In these situations, the lead agency is under no obligation to use the proponent's objectives as its own and should write the project objectives in such a way as to that explains the underlying need from the standpoint of public need. . . [I]t is the lead agency's objectives that form the basis for determining the appropriate range of alternatives to be analyzed in the EIR." *CEQA Deskbook*, Bass, Bogdan and Rivasplata, P 137. Examples of less self-serving Project Objectives might be:

- Develop a residential project that is harmonious with the surrounding community and minimizes impacts to the sensitive receptors within the senior residential communities adjacent to the Project
- Enhance the benefits from the existing community walking trail by creating a walking experience that preserves portions of the adjacent green spaces for the community

89-12

D. Site Access and Onsite Circulation

The DEIR and the developer have proposed a site access and circulation solution that eliminates the community walking trail by extending Adams to Star. There is in fact a much more sensible solution. Star can be extended and widened to a cul de sac ending at the community trail. Access to the site would be only through Star, with feeder streets into Street A and Street B for onsite circulation. The developer would record a covenant dedicating a vineyard buffer/setback between the community trail and the vineyard parcel to the east of Star and a narrower open space vineyard buffer setback against that portion of the vineyard to the east side of Star. Lots 30 through 40 would be increased in length to include portions of lots 41 through 50 and these

89-13

3

10 lots would be eliminated. Adams would remain in its current configuration and the community trail would continue to Adams with the existing vineyards creating a buffer/green zone.

89-13 Cont.

E. Landscaping Plan

The developer suggests that the "The existing vineyards on the Project site would be removed with the exception of an approximately one-acre portion of the vineyard that would remain located in the westernmost "panhandle" portion of the site." [DEIR 2-25] This is an entirely unsatisfactory solution. As mentioned in Section D above, a much better alternative is to preserve a portion of the existing vineyards and make this the front yard for Lots 30 to 40. Such a solution will have the dual benefits of both preserving an important community amenity in the community trail and creating a desirable view corridor for Lots 30 – 40, which will now be larger and have direct vineyard access. By eliminating lots 41-50, the Project density is also reduced, thereby reducing the Project impacts.

89-14

F. Offsite Improvements

For the reasons stated above, I object to the extension of Adams street at the cost of the community trail. [DEIR 2-30}

89-15

G. Phasing and Timing.

The City should require the developer to enter into a development agreement to vest the 6 year phasing in of the multifamily portion of the project. The development agreement can require that the community trail be enhanced and preserved in the manner discussed in this letter. [DEIR 2-30]

89-16

H. Project Analysis Assumptions

The DEIR incorrectly conflates construction timing with phasing. If as Section 3.0-3 states, the future buildout is completely unknown, then there is no plausible way in which to evaluate the impacts of the buildout. Although CEQA does not require that purely speculative assumptions be made on future growth, the DEIR is fatally flawed because it consciously disregards entirely foreseeable market demand. The traffic analysis should have horizon years based on the projected buildout, with the possibility or deferring or accelerating the later phases after conducting additional supplemental CEQA analysis.

89-17

89-18

I. Aesthetics/Scenic Resources

In no place does the DEIR adequately describe the aesthetic and visual impact of the Project to the users of the community trail. An entire section should be dedicated to the deleterious impacts of the Project to the users of the trail. As **Figures 3.1-2 to 3.1-5** show, the community trail is currently a magnificent cultural resource with views of vineyards, wetlands and open space on both sides of the path, all the way to Adams street. There is no discussion in the DEIR of the harmful impacts to this visual experience that results from this development.

89-19

The General Plan is also supportive of the approach advocated for in this letter. It states:

4

"Policy 4.5.2: Open space should be brought into the community wherever possible as a reminder of the natural setting of the community. . ."

"Policy CD5.1: Preserve the visual and physical connection to agriculture by protecting views from streets, parks, and open spaces to vineyards, agriculture, and hillsides. Where new streets are extended adjacent to agriculture, encourage hillside, and vineyard views by maintaining agricultural activities at the road edge. Existing east and west entries should be maintained in their current appearance, protecting and improving views of vineyards and the surrounding hillsides wherever possible.

89-19 Cont.

The report authors give mere lip service to visual impacts. It establishes criteria for analysis but fails to apply its own analytical standards to make the obvious conclusion that the Project as proposed has a significant unavoidable impact to the users of the community trail. The criteria that can be applied are as follows:

"The determination of when changes to the visual environment become a substantial adverse effect is based on the following primary factors: (a) the existing scenic quality of an area; (b) the level of viewer exposure and concern regarding visual change; and (c) the level of actual visual change caused by the project as seen by a given viewer group. The overall visual sensitivity is first established based on existing visual quality, viewer exposure, and viewer concern. These factors are then considered together with the level of expected visual change or contrast and significance. Visual change is an overall measure of the alteration or change in basic visual attributes such as form, line, color, and texture as a result of the project. Thus, a substantial adverse effect can occur when a project results in high levels of visual change or obstruction of scenic views by sensitive receptors."

"Development of the Project site would change the undeveloped character of the site from vineyard and annual grasslands to a developed urbanized environment . . . The Proposed Project would change views at this viewpoint through removal of the vineyards and development of roads, residences, and new landscaping."

89-20

The DEIR concedes that "a scenic vista is generally defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. **This can include public views of agricultural open space, vineyards, creeks, and major landscape features.** Based on this definition, the Project creates an adverse and unavoidable impact to a scenic vista despite the conclusion in the DEIR to the contrary. The existing community trail fits this definition of a scenic vista for the users of the trail.

89-21

J. Alternatives

Under CEQA, a project is required to look at a reasonable range of feasible alternatives. In this case, all of the alternatives are straw men, meant to be easily discarded with a minimum of analysis, founded on project objectives that are inadequate. Alternatives 1 and 2 are the No Project alternatives and invariably fail. Doing nothing when we have a housing crisis merely avoids the problem. The increased density alternative will be politically unsupportable and financially unviable. Not surprisingly, the report concludes that the No Project/No Development alternative is environmentally superior.

89-22

5

The Park/Open Space Preserve alternative is a step in the right direction but is neither aggressive nor visionary. Frankly, the developer should have simply incorporated the 1 acre wetlands preserve into the Project and saved the cost of offsite mitigation. I suspect this is part of the strategy—to allow the project to be approved with the 1 acre mitigation as a condition imposed by the Council. This change would be a win for the developer. 89-23

The Project should have been instead a more creative variant of the Park/Open Space Alternative. The range of alternatives must be selected to foster meaningful participation and informed decision making (Guideline 15126.6(f)Preserving the community trail and creating a buffer between the trail walkers with vineyards and green scape would have earned the support of the community. The best alternative would be a smaller project that eliminates lots 41 through 50 and creates the vineyard buffer. It would also incrementally increase the size of lots 30 through 40, giving these lots the benefit of the vineyard buffer and the view corridors to the north. This project would also eliminate the extension of Adams and instead creates a wider cul-de-sac ending out of Star street, using Star for primary circulation. The 3.4 acre future multifamily parcel would be stepped back from the community trail as well, with the vineyard buffer continuing to the existing terminus of Adams as well as over a portion of lots 24, 27 and 26 at the other end. As part of a development agreement with the city, the developer's rights would be vested for 10 years, and additional density would be allowed through the remaining parcels. 89-24

Conclusion:

The DEIR acknowledges, albeit halfheartedly and indirectly, that the impacts from the Project to the community trail are material, significant and unavoidable. "Adverse visual effects can include the loss of natural features or areas, the removal of urban features with aesthetic value, or the introduction of contrasting urban features into natural areas or urban settings. Natural features may include but are not limited to open space; native or ornamental vegetation/landscaping; topographic or geologic features; and natural water sources. The loss of natural aesthetic features or the introduction of contrasting urban features may have a local impact, or, if part of a larger landscape, may contribute to a cumulative decline in overall visual character. **The vineyard present in the southwestern portion of the Project site would be considered a natural feature."** 89-25

As proposed, the Project trips the threshold for significance to damage to an important scenic resource, namely the existing community trail. The St. Helena community recognizes the importance of new housing. I am not opposed to the development of housing—both single family and multifamily—as a fair response to the statewide imperative that local jurisdictions encourage the development of housing. My 89-26

6

request is that the City reject the project as proposed and recommend that the developer create a project that reduces the density along the frontage of the project to preserve and enhance the important cultural amenity that the community trail represents as proposed in the alternative above. The revised Project should include all of the entitlements needed by the Developer and address the phasing of buildout and examine the impacts of buildout.

89-26 Cont.

Sincerely,

Indrajit Obeysekere, Esq
SL Realty Advisors

iobeysekere@gmail.com
Vineyard Valley
43 Laguna Seca Ct., St. Helena

Copies: Ownership, Vineyard Valley
Vineyard Valley Homeowner's Association

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Response to Letter 89
Indrajit Obeysekere
November 22, 2021

89-1 The comment provides an introduction and clarifies that the letter is submitted as a resident of Vineyard Valley Mobile Home Park and not on behalf of other residents or as legal counsel for Vineyard Valley.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

89-2 The comment states the Vineyard Valley community is opposed to the Project and the Draft EIR is inadequate because it does not address impacts to the Vineyard Valley senior citizen residents, which are sensitive to impacts from pollutants, noise, glare and traffic and goes on to note the residents are dependent on the open space that will be eliminated by the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the EIR analysis is inadequate, but it should be noted that the Draft EIR includes detailed analyses of all of the topical areas noted in this comment.

89-3 The comment refers to the existing trail that is located parallel to the City's levee maintenance road and asserts the Project will diminish enjoyment of the trail due to development of the Project site and notes that the Draft EIR includes an analysis of aesthetic impacts.

The commenter's opinion that the Project would affect enjoyment of the trail is noted and forwarded to the decision makers for their consideration. The aesthetic impacts of the Project are addressed in Section 3.1 of the Draft EIR. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

89-4 The comment states an opinion that development of the Project site resulting in the loss of open space will impact property values and requests that the City Council to consider this as they review the Project.

CEQA does not require an evaluation of the potential financial impacts of a project. The commenter's opinion that the Project would affect neighboring property values is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

89-5 The comment claims that the Project would reduce the length of the "community" trail near the site by approximately 40%, and eliminate the prescriptive easement (of the trail) for the benefit of the public over private land and alleges that the Draft EIR diminishes the significance of this community asset.

The Draft EIR acknowledges the existence of the public trail, as noted on pages 2-2 and 2-23 in Chapter 2, Project Description. The EIR notes that the maintenance road adjacent to the northern boundary of the Project site is not a part of the Proposed Project, nor is it a City trail. There is an existing City trail located on the northside of the maintenance road, as shown on a trails map provided in Chapter 3, Changes to the Draft EIR. A small portion of the maintenance road, which is merged with the trail in this location would be paved to accommodate construction of the Adams Street extension, but sidewalks would be provided along the extension of Adams Street to provide a safe connection to the remainder of the maintenance road and the trail, which would remain unaltered by the Proposed Project.

89-6 The commenter states they are not opposed to development of the Project but are concerned that the Vineyard Valley community was not consulted and indicate the addition of mitigation would have improved the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

89-7 The comment states an opinion that the Draft EIR is piecemealing the Project because the "whole of the action" does not evaluate additional discretionary approvals effectively eliminating areas of potential controversy and impacts thereby denying the public an opportunity to review and comment.

As noted in Chapter 2, Project Description, the Project applicant submitted an application for a Tentative Subdivision Map that was deemed complete by the City in March 2011. The applicant will subsequently need to obtain approval of an Affordable Housing Agreement, Design Review, or a Use Permit to construct the attached multifamily housing at this time. The public will have the opportunity to review and comment on these subsequent actions. The City is not piecemealing the Project to reduce or eliminate Project impacts and the Draft EIR properly evaluated impacts of the Project.

89-8 The comment states an opinion that Project approvals are being piecemealed and therefore the Draft EIR should be resubmitted and recirculated.

Please see Response to Comment 89-7.

89-9 The comment states an opinion that the applicant plans to piecemeal the Project by deferring the multifamily housing to a further date since it would require a conditional use permit.

Please see Response to Comment 89-7.

89-10 The comment states an opinion that referring to the trail as a “gravel maintenance road” is dismissive and fails to convey the importance of the trail to the community.

Please see Responses to Comments 70-6 and 89-3.

89-11 The comment states an opinion that the Project would eliminate a substantial portion of the trail by extending Adams Street to Starr Avenue and adding parking to both sides of the extended street.

Please see Responses to Comments 89-3 and 70-6.

89-12 The comment states an opinion that the Project objectives are the applicant’s objectives rather than those of the City as lead agency.

The Project objectives are endorsed by the City as lead agency. No further response is required; the comment is noted and forwarded to the decision makers for their consideration.

89-13 The comment suggests that instead of eliminating the trail by extending Adams Street to Starr Avenue, Starr Avenue can be extended and widened to a cul-de-sac ending at the community trail.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter’s opinion is noted and forwarded to the decision makers for their consideration.

89-14 The comment states an opinion that an alternative to preserve a portion of the existing vineyards is to incorporate the vineyards as a front yard for Lots 30 to 40.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter’s opinion is noted and forwarded to the decision makers for their consideration.

89-15 The comment states an objection to the extension of Adams Street at the cost of the community trail.

The comment does not identify any specific areas where the EIR or analysis is inadequate; therefore, no response is required; the comment is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 89-5 regarding the trail.

89-16 The comment states an opinion that the City should require the developer to enter into a development agreement to vest the 6-year phasing of the multifamily portion of the Project and to enhance and preserve the community trail in the manner stated in the comment.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

89-17 The comment states an opinion that the Draft EIR is flawed because it disregards foreseeable market demand.

The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

89-18 The comment states an opinion that the traffic analysis should be evaluated in phases and construction should be delayed or accelerated based on the phased analysis.

Section 3.14 of the Draft EIR contains the transportation analysis. The transportation analysis does not include a phased approach to buildout of the Project, and the horizon year analyzed was 2040. As stated in the Draft EIR and Appendix K, the Proposed Project would be expected to be completed and occupied by the year 2040.

89-19 The comment states an opinion that the Draft EIR does not adequately describe the aesthetic impact of the Project to users of the community trail.

Please see Responses to Comments 89-2 and 89-3.

89-20 The comment states an opinion that the Draft EIR fails to apply its own analytical standards and the Project would have an obvious significant unavoidable impact to users of the community trail.

Please see Responses to Comments 89-3 and 70-6.

89-21 The comment states an opinion that the community trail fits the definition of a scenic vista.

The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

89-22 The comment states an opinion that the Project alternatives were designed to be easily discarded in favor of the Proposed Project.

Chapter 5 of the Draft EIR evaluates Project alternatives. Section 15126.6(a) of the CEQA Guidelines states there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. This rule is described in Section 15126.6(f) of the CEQA Guidelines and requires an EIR to set forth only those alternatives necessary to foster informed decision-making. As defined in Section 15126.6(f), the rule of reason limits alternatives analyzed to those that would avoid or substantially lessen one or more of the significant effects of a project. Of

those alternatives, an EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives that was selected for analysis includes those that would result in reduced impacts when compared to those of the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration.

89-23 The comment states an opinion that the Park/Open Space Preserve alternative is not aggressive or visionary and the developer should have incorporated the wetland into the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

89-24 The comment states an opinion that the best alternative would be a smaller project that eliminates lots 40 through 50, creates a vineyard buffer, and does not include the extension of Adams Street.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 89-22.

89-25 The comment states that the Draft EIR identifies significant and unavoidable impacts to the community trail and states an opinion that the vineyard would be considered a natural feature.

The analysis in Section 3.1, Aesthetics determines impacts to scenic vistas and the potential for the Project to conflict with zoning and other regulations that govern scenic quality or substantially degrade the existing visual character or quality of public views of the site and its surroundings to be less than significant. The Draft EIR does not identify any significant and unavoidable impacts to scenic vistas, changes in visual character or public views.The commenter does not state where in the Draft EIR it is stated that impacts to the adjacent trail are significant and unavoidable.

89-26 The comment states an opinion that the Draft EIR exceeds the threshold for significance for damage to scenic resources and requests the City reject the Project in favor of a project with reduced density and preservation of the community trail.

The commenter's opinion is noted and forwarded to the decision makers for their consideration.

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Comment Letter 90

From: Tishna Pastrama <pastrama@sbcglobal.net>
Sent: Tuesday, November 30, 2021 2:08 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Subject: [External] Against the Hunter Subdivision

Dear City of St. Helena and to whom it may concern:

We have lived in St. Helena for 40 years. This was always such a quaint and special place to call home. We have lived through all of the changes that have taken place and have happily grown with those changes.

However, the last 5 years we have experienced so many things that we hadn't had to before and must now be prepared to face in the future on unfortunately a more continual basis that it has brought up many questions and concerns. The Hunter Project is the largest red flag among them.

With fires, extreme draught concerns, electricity outages, roads that have deteriorated to beyond abysmal condition, a parking state of emergency on our streets that prevent home owners from even parking in front of their own homes, a sewer system that can barely function right now without additional users, bridges that although historic and something to be proud of that would be unable to safely bare the load of more traffic in an emergency. 90-1

The Hunter Subdivision would add too many residents into a space that would not have adequate parking for each car that would be living in each dwelling. There is currently a major problem on the east side of St. Helena for that exact reason with the current residents of Hunt Avenue, Grove Court and Starr Avenue having to deal with cars lining their street with cars from tenants of the apartments on Monte Vista and the Huntsgrove Apartments. The streets for the new Hunter Subdivision will be packed with cars adding a major safety issue from many perspectives. Kids needing to walk through that subdivision to the bus stop will be dealing with high traffic. The overflow of cars needing a place to park will become worse than a nightmare as there are no spaces available in the immediate surrounding streets now. There will be no place for all those vehicles to park. 90-2

What provisions are in place to provide adequate parking that does not interfere with the current city residents? 90-3

What safety measures do you have in place to safely evacuate the whole east side from Adams to Pope with the additional up to 350-500 new residents in the case of an emergency and Silverado Trail is not accessible - as we have just experienced? 90-4

We feel it is extremely discriminatory for tenants to have all of the new subdivisions / apartments/ affordable housing on only one side of the town. How can you answer this major concern? 90-5

Our electricity grid is inferior currently without any new building. Does the city plan to improve the electric grid before any new subdivisions are approved or will we all be stuck with an even more taxed grid that can't handle the current use right now? 90-6

Wanting the best for our town,

Gabriel and Tishna Pastrama
Sent from my iPhone

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Response to Letter 90
Gabriel and Tishna Pastrama
November 30, 2021

90-1 The commenters state that they are concerned about the Project's impact on fire risks, drought conditions, electrical outages, road conditions, parking, sewer capacity, and emergency access.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. Further. the adequacy of parking supply is not an environmental impact under CEQA. The commenter's concern is noted for the decision makers and no further response is required. Therefore, the commenter's concern is noted for the decision makers.

The Project's impact on water supply is discussed in Master Response 2; the Project's impact on emergency access is discussed in Master Response 1; and the Project's impact on sewer capacity is discussed in Master Response 4. Please also see Response to Comment 51-4 related to fire protection.

90-2 The comment expresses concern regarding the Project's impact on parking and pedestrian safety.

See Response to Comment 90-1.

Regarding pedestrian safety, Section 3.14 of the Draft EIR addresses this concern. This section analyzes the Project's transportation impacts related to consistency with plans or policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, hazardous design, and emergency access. The Draft EIR concludes that the Project would have less-than-significant impacts to pedestrian safety.

90-3 The comment repeats a concern related to the City's parking.

Please see Response to Comment 90-1.

90-4 The comment raises a concern regarding the Project's impact on emergency evacuation.

Please see Master Response 1, which discusses emergency access and evacuation.

90-5 The comment states an opinion that affordable housing should not be located on one side of the City and, because of this feels that the Project is discriminatory.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; Therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

90-6 The commenter is concerned with the Project's impact on the City's electrical grid and current condition of the City's grid.

No specific concerns with the existing electrical infrastructure were identified. The comment does not identify any specific areas where the Draft EIR analysis, finding that the Project's energy impacts are less than significant, is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

Comment Letter 91

From: Joann Patton <mcnjo@buckeye-express.com>
Date: October 31, 2021 at 3:33:55 PM PDT
To: publicomment@cityofsthelena.org
Subject: Hunter Project

To whom it may concern,
This project SHOULD concern us all and there are a myriad of reasons to be opposed to it. I will leave detail to others but two main reasons are lack of water and city liability in case of levee failure. This discussion needs to end and never reopen.
Thank you.
Joann Patton
1832 Crinella
St Helena CA
Sent from my iPhone

91-1

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Response to Letter 91
Joann Patton
October 31, 2021

91-1 The comment states opposition to the Project. In particular, the comment mentions the Project's water supply and potential levee failure as issues.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 92

From: Kathy Paulus <toonie.anderton@gmail.com>
Sent: Saturday, October 30, 2021 12:11 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision Project

The Hunter project is to be situated in the Napa River floodplain. Floodplains provide groundwater recharge, filter sediment and contaminates, transport nutrients, and support habitats for some of our most sensitive living resources. A floodplain is an area of land adjacent to a river which stretches from the banks of its channel to the base of the enclosed valley walls and which experiences flooding during periods of discharge. 92-1

Building on floodplains has serious consequences because water that would be otherwise absorbed by the land instead runs off more quickly into the river that then burst their banks. 92-2 An area that is subject to natural flooding from an adjoining waterway is in an area that makes the habitats for many creatures rare and unnatural as their natural habitable has been destroyed. 92-3 It also makes it very dangerous for the creatures to build down river as the oils and dirt gets washed in the river polluting it by dangerous amounts. 92-4

Developers see the advantage to building in a floodplain because they tend to be flat and therefore easy to develop and are close to other amenities. This is one of many very big reasons to STOP the Hunter Subdivision Project. 92-5

From a concerned citizen,
Kathleen Paulus
St. Helena

Response to Letter 92
Kathleen Paulus
October 30, 2021

92-1 The comment states that the Project would be located in the Napa River floodplain, which experiences periodic flooding.

Please see Master Response 3.

92-2 The comment states that building on floodplains has serious consequences because of increased runoff.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

92-3 The comment states that building on a floodplain would destroy natural habitat for many species.

Potential impacts to wildlife species are discussed in Section 3.4 of the Draft EIR. The comment is noted and forwarded to the decision makers for their consideration.

92-4 The comment states an opinion that construction on a floodplain would make it dangerous for wildlife habitat downriver as oils and dirt would pollute the river.

Potential water quality and runoff impacts are discussed in Section 3.9 of the Draft EIR. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see also Response to Comment 92-3.

92-5 The comment states an opinion that developers want to build in floodplains because they tend to be flat and tend to be close to other amenities.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

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Comment Letter 93

LAW OFFICES OF

PERRY, JOHNSON, ANDERSON,
MILLER & MOSKOWITZ LLP

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November 1, 2021

Maya DeRosa, AICP
Planning and Building Director
City of St. Helena Planning Division
1572 Railroad Ave
St. Helena, CA 94574

Re: **Comments to Draft EIR - Hunter Subdivision Project**

Dear Ms. DeRosa:

Enclosed herewith please find the following two comment letters to the DEIR submitted on behalf of the Applicants:

November 1, 2021, W-Trans; and

October 20, 2021, DKS.

93-1

Very truly yours,

Leslie R. Perry

LRP:kh
Enclosure

November 1, 2021

Mr. Ben Van Zutphen
100 B Street
Santa Rosa, CA 95401

Comments on the Environmental Impact Report (EIR) for Hunter Subdivision Project

Dear Mr. Van Zutphen;

As requested, W-Trans has reviewed the Draft Environmental Impact Report (DEIR) completed for the City of St. Helena regarding the proposed Hunter Subdivision project. Based on our review we have comments regarding the approach that was used to analyze vehicle miles traveled (VMT), which is the metric used to evaluate the transportation impacts of development projects under the California Environmental Quality Act (CEQA). The DEIR concluded that the project would result in a VMT impact that would be significant and could not feasibly be mitigated. After reviewing this analysis, we believe that the approach taken in this analysis is overly conservative and does not meet the intent of current City and state policies, as described below. 93-2

Background

The proposed Hunter Subdivision project would be located north of Hunt Avenue and east of Adams Street in St. Helena. The site is 16.9 acres in size and the project would include 51 single-family homes, 11 of which would include affordable accessory dwelling units; a portion of the site is also being reserved for workforce housing, which would consist of 25 affordable units. Located approximately 0.4 miles from the center of St. Helena, the site is within walking distance of a range of commercial uses that could serve project residents.

CEQA requires analysis of the anticipated impacts of development projects, including transportation impacts. Senate Bill (SB) 743 established the assessment of Vehicle Miles Traveled (VMT) associated with the project as the metric for establishing traffic impacts due to a development project. As stated in guidance from the state's Office of Planning and Research (OPR) provided in in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018, the purpose of SB 743 was to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions." The OPR guidance was established to support these goals and encourages development at locations that feature characteristics including proximity to a mix of land uses and access to non-vehicle modes of transportation, which generally reduce both the number and length of vehicle trips. 93-3

Lead agencies have the authority to adopt their own thresholds of significance, but since the City has not yet done so, the OPR guidance was used as the basis in the DEIR. The guidance indicates that either the citywide or regional per capita VMT may be used to establish a baseline for evaluating residential projects, and the staff directed the EIR consultant to use the citywide average.

Assessing VMT Impacts of Development Projects

Measuring VMT: The OPR guidance indicates that travel demand models are the recommended data source for estimating VMT. At the time the analysis was conducted, the Napa-Solano Travel Demand Model was the most localized model available, although the Napa Valley Transportation Authority has since completed its development of an updated model. The unit of measurement in travel demand models is traffic analysis zones (TAZs), of which there are seven in St. Helena. The assumption in analyzing VMT is that incoming development will result in similar travel patterns as existing development in the vicinity of the proposed project; therefore, the VMT rate for residential development in the project TAZ is assumed to be applicable to the project. 93-4

490 Mendocino Avenue, Suite 201 Santa Rosa, CA 95401 707.542.9500 w-trans.com
SANTA ROSA • OAKLAND

Adopting the citywide or countywide average as the baseline for VMT has important implications for incoming residential development projects. As indicated in the table, the two TAZs for which the VMT impacts could potentially be mitigated when using a citywide threshold would require project VMT to be reduced by 4.8 percent and 12.4 percent. While generally considered feasible, this level of mitigation would be difficult to achieve for residential projects in the context of St. Helena. For example, transit-related mitigation measures are among the most effective strategies to reduce project VMT, but to achieve this reduction would require more frequent service than is currently available.

93-8

Provision of affordable housing has also been identified as a strategy that can be presumed to reduce project VMT. As noted in the DEIR, the OPR guidance indicates that if a proposed project consists of 100-percent affordable housing, VMT impacts may be presumed to be less than significant. The guidance also states that lead agencies may determine that the VMT impacts are less than significant for projects with a high percentage of affordable units, or that some lower level of VMT reduction may be factored into the estimation of project-related VMT based on a lower amount of affordable housing. The DEIR noted the inclusion of affordable workforce housing as part of the project but did not attempt to estimate any associated VMT reductions.

93-9

Given the limited options available to reduce VMT for residential projects in St. Helena, if the citywide average is used as the baseline for determining significance, it appears likely that all incoming residential development projects (that generate more than 110 trips per day) in at least six of St. Helena's TAZs would have a significant VMT impact, while it may be feasible to mitigate the impacts for some projects in the remaining zone; unmitigable impacts would require preparation of an EIR and City Council adoption of a statement of overriding considerations. This would increase the cost to project applicants and could increase the difficulty in addressing the City's need for housing. Conversely, adoption of the countywide per capita VMT as the basis for a threshold of significance would result in a less-than-significant VMT impact for all proposed residential projects within the City limits.

93-10

Meeting the Intent of SB 743 and Addressing St. Helena's Housing Needs

As noted above, SB 743 was passed with the intent of reducing greenhouse gas emissions, promoting use of active transportation, as well as providing infill development. As such, the adoption of an appropriate baseline to evaluate VMT impacts of incoming development should be considered in the context of how those projects relate to the goals of SB 743 as well as other adopted goals and policies. St. Helena's unique characteristics that warrant consideration include the existing commute pattern, need for affordable housing, and jobs/housing balance; taken together, these factors indicate a need to increase housing options for local workers which, in turn, would reduce commute trip lengths and support reductions in VMT.

- **Commute pattern:** The Housing Element notes that 78.1 percent of workers in St. Helena commute from outside the City. Considering the distance that workers travel, the 2018 American Community Survey estimated that 75.4 percent of workers in St. Helena travel more than 10 miles to work, and 31.9 percent travel more than 25 miles.
- **Housing affordability:** The "St. Helena Housing Update Report" commissioned by the City in 2018 noted that 37.6 percent of St. Helena residents are considered "housing burdened" as they spend more than 30 percent of their incomes on housing.
- **Jobs/housing balance:** As noted in the Housing Element of the City's General Plan, the ratio of jobs to housing in St. Helena is substantially higher than other municipalities in Napa County, meaning that more houses are needed to accommodate workers with jobs in the city. The ratios of jobs to employed residents for Napa County municipalities are summarized in Table 2.

93-11

Table 2 – Ratio of Jobs to Employed Residents in Napa County

Jurisdiction	Jobs per Employed Resident (2010)
Napa County	1.20
American Canyon	0.55
Calistoga	1.02
Napa City	0.98
St. Helena	**1.90**
Yountville	1.76
Unincorporated	1.89

Source: *Housing Element Update, 2015-2023 Housing Needs Assessment*, City of St. Helena, 2015.

93-11 Cont.

The Hunter Subdivision project, which would be located within walking distance to the center of town, provides affordable housing and would give preference to local workers, appears to be a project that could help address these issues. It is reasonably anticipated that the residents of these homes would reduce their commutes to jobs in St. Helena by moving to the City, which is the primary purpose of the VMT metric. However, using the citywide per capita VMT as the basis for evaluating VMT impacts, the DEIR has determined that the project impacts are significant and unavoidable, which is counterintuitive. Had the countywide per capita VMT been selected as the baseline, the project would have been identified as having a less-than-significant impact, indicating the far-reaching implications of this approach for the Hunter Subdivision and other projects.

93-12

For the City of St. Helena to be able to achieve its housing goals, as stated in the General Plan, consideration should be given to the implications of selecting the appropriate baseline to evaluate VMT impacts in terms of the type of development that it will encourage; how this relates to the City's land use, housing, and transportation goals; and how it responds to statutory requirements. This is one of the many issues involving implementation of SB 743 that has been challenging for communities across California. Given the differences between communities throughout the state, there is no one-size-fits-all policy. So, while the OPR guidance has provided the basis for implementing SB 743, many jurisdictions have adopted policies that have built on and modified this guidance.

93-13

Please contact us if there are any questions regarding these comments.

Sincerely,

Barry Bergman, AICP
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TECHNICAL MEMORANDUM

DATE: October 20, 2021

TO: Tim Massey | Organization

FROM: Jim Damkowitch | DKS Associates
Josh Pilachowski | DKS Associates

SUBJECT: Review of City of St. Helena Application of SB 743 Requirements Project #21082-000 of the Planned Residential Development

INTRODUCTION

The purpose of this white paper is to review the project description of a proposed residential project in St. Helena for compliance and consistency with local zoning and policies and the expected effect on the surrounding community and circulation network, as these relate to the Project's Vehicle Miles Traveled (VMT) potential impacts. The components analyzed include the following:

- Consistency with City zoning and land use designations
- Consistency with current ongoing planning initiatives
- Non-market-based housing ratio and California Density Bonus Law criteria
- Project VMT generation within Regional Average VMT per Capita threshold

This paper describes each of these four components and their relevance to the proposed development as a consideration for VMT analysis.

93-14

PROJECT DESCRIPTION

The Project site is a 16.9-acre lot in northeast St. Helena with 87 proposed residential dwelling units in the form of detached single-family homes, some of which will have accessory dwelling units, and attached multi-family units (duplex and/or triplex units). The multi-family units are to be presented as Affordable Housing units, representing 29% of the Project dwelling units (i.e., 25 units).

93-15

PROJECT COMPONENTS FOR CONSIDERATION

CONSISTENCY WITH CITY ZONING AND LAND USE DESIGNATIONS

As stated in the Project EIR[1], the Project site was designated as Medium Density Residential (MDR) in the City of St. Helena 1993 General Plan and this zoning was not changed in the recent General Plan Update 2040 (adopted June 2019). MDR zoning allows for single family homes (detached or attached) and accessory dwelling units (ADU) or junior accessory dwelling units[2] (JADU), at densities between 5.1 to 16.0 dwelling units per gross acre (an increase over the upper density of 12.0 dwelling units per acre used in the 1993 General Plan allowing for higher residential density).

As detailed in **Table 2-1** of the Project EIR, the total development will include 51 Single-family detached residences with an additional 11 accessory dwelling units, as well as 25 attached units in the form of duplexes and/or triplex units. This results in a density of 5.15 dwelling units per acre, within the accepted range of densities for the designated zoning. This is the minimum number of units which would meet the density requirements for the designated zoning.

The Project proposed 11 ADUs, representing 22% of the planned single-family residences. Relevant policies in the zoning code include the following:

- 17.116.030.B. **Effect of Conforming**. An ADU or JADU that conforms to the standards in this section will not be:
  - Deemed to be inconsistent with the city's general plan and zoning designation for the lot on which the ADU or JADU is located.
  - Deemed to exceed the allowable density for the lot on which the ADU or JADU is located.
  - Considered in the application of any local ordinance, policy, or program to limit residential growth.
- 17.116.030.E. **General ADU and JADU Requirements**. The following requirements apply to all ADUs and JADUs:
  - Zoning. An ADU or JADU may be created on any lot that is zoned to allow single-family dwelling residential use or multifamily dwelling residential use (i.e., residential, mixed-use, and agriculturally zoned parcels).

While ADUs have not previously been common in St. Helena According to the Project EIR, only 37 ADU applications have been submitted between 2013-2020 representing 1.7% of single-family residences, the Project is consistent with all relevant density restrictions and zoning code policies, including ADU use.

93-16

[1] Hunter Subdivision Project EIR, September, 2021
[2] 500 sq.ft. or less, fully contained within single-family structure, includes bathroom and kitchen accessories.

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CONSISTENCY WITH PLANNING INITIATIVES

Upon review of the Planning Department active and ongoing projects, there are no current or planned projects overlapping or nearby the project Site. The following documents were reviewed for policies and planning initiatives relevant to the Project:

- Napa Countywide Bicycle Plan
- St. Helena Pedestrian Plan
- St. Helena General Plan Circulation Section
- St. Helena General Plan Climate Change Section

The following relevant policies, programs, and initiatives and their relevance to the Project were identified:

Based on the Proposed Bicycle Network in the Citywide Bicycle and Multimodal Plan (2012), the proposed Napa Vine Trail passes adjacent to the project Site, allowing for easy connection to the regional bicycle and Pedestrian trail network. St. Helena has a 2.6% mode share of bicycles for commuting to work, three times higher than the Countywide mode share. Residential projects that connect to regional trails provide incentive for increase alternative transportation modes as a viable alternative for travel.

93-17

VMT ANALYSIS SCREENS (PER SB 743)

SB 743 was signed into law in 2013 with the intent to better align California Environmental Quality Act (CEQA) practices with statewide sustainability goals related to efficient land use, greater multi-modal choices, and greenhouse gas reductions. The provisions of SB 743 became effective Statewide on July 1, 2020 and are applicable to the Project's environmental clearance under CEQA.

The Office of Planning and Research (OPR) released its Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018). The advisory lists the following screening thresholds for land use projects. OPR's Technical Advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing as described below.

- Projects that are consistent with the Sustainable Communities Strategy (SCS) or General Plan and generate or attract fewer than 110 daily trips (consistent with trip generation associated with projects eligible for a Categorical Exemption under CEQA).
- Map-based screening for residential and office projects located in low VMT areas, and incorporate similar features (density, mix of uses, transit accessibility).
- Certain projects within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor. However, this will not apply if information indicates that the project will still generate high levels of VMT.

93-18

- Affordable Housing Development in infill locations.
- Locally serving retail projects, typically less than 50,000 square feet.

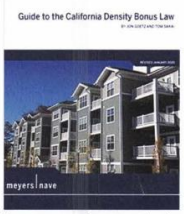
Although many lead agencies in urban and suburban areas are closely following OPR's recommendations, the guidance provided in OPR's technical advisory are considered to be recommendations, rather than requirements. It is also important to note that the technical advisory does not have the authority of law. As SB 743 implementation continues, cities and counties throughout the state have developed alternative approaches and criteria to address the intent of SB 743. The technical advisories provide the perspective of the State of California as interpreted by OPR but do not elevate to mandatory legal requirements. In many cases, local or regional agency perspectives differ from those of the state where substantial evidence would support alternative approaches.

As stated in the Project EIR, the Project did not meet any the VMT screening criteria (small projects with low trip generation, map-based screening, nearness to transit, or 100% affordable housing). Of the project-level screening criteria established by SB 743, three could be potentially applicable to the proposed project based on alternative applications/interpretations of OPR guidance as seen in other jurisdictions of the State: project size; map-based screening; and, affordable housing. These examples are described below.

93-18 Cont.

Affordable Housing Screen

SB 743 allows non-market based residential projects to be screened from having to perform a VMT analysis for CEQA. This screen is consistent with many other initiatives statewide to address California's housing crisis. The Office of Research and Planning (OPR) advises that residential projects consisting of 100 percent affordable units be presumed to have less than significant VMT impact. No additional guidance was provided on when or how to screen projects that have a substantial affordable component, but less than 100%.



Jurisdictions have the discretion to specify additional criteria such as a specific percentage of non-market rates units within an overall development proposal for application of this screening option. An alternative approach example to OPR's 100% affordable unit guidance is described below.

93-19

Example City of Goleta

If at least 20 percent of a housing development consists of non-market rate housing then the entire development proposal would satisfy this screen. This includes farmworker housing. The 20 percent justification comes from the Guide to the California Bonus Law. The Density Bonus Law (California Government Code Sections 65915 – 65918) provides incentives to encourage developers to develop affordable and senior housing (i.e., a developer who meets the requirements of the state law is entitled to receive the density bonus and other benefits).

As stated in the Project EIR, the multi-family units are to be presented as affordable housing units, which represents 29% of the proposed project dwelling units. Based on the 20% affordable housing VMT screen provisions implemented in other jurisdictions (e.g., City of Goleta), the proposed project would be screened from having to perform a VMT analysis and hence would not be subsequently determined to result in a significant and unavoidable VMT impact under CEQA.

93-19 Cont.

COMPARISON WITH REGIONAL AVERAGE VMT

In lieu of not having formally adopted VMT thresholds or screens for CEQA purposes, the City of St. Helena directed the EIR consultants in preparation of the DEIR to apply a VMT per capita VMT threshold for residential developments at 15% below the Citywide average to determine VMT impacts. Although the choice of average (statewide, countywide, regionwide or citywide) is at the discretion of the local agency, basing a VMT average on a larger geographic area (i.e., regional, multi-county or countywide) is generally a more common and accepted choice by local agencies statewide. This is driven by the strong nexus between SB 743 and the State's long-term climate action goals which alludes to a more "regional" analysis of VMT as required for regional air quality emissions analyses. The relationship of SB 743 with the State's climate action goals is described below.

SB 743 and Climate Change

The State of California is committed to reducing greenhouse gas (GHG) emissions and achieving long-term climate change goals. To achieve these climate change goals, California needs to reduce VMT. Over the last 40 years, with increase in statewide population, the overall VMT has also increased. Transportation is the single largest sector contributing to the State's GHG emissions. More than 40 percent of the GHG emissions come from the transportation sector, primarily passenger cars and light-duty trucks. Reducing the number of vehicle trips and the length of the trips are expected to result in reduced VMT and reduced GHG emissions. The new State CEQA Guidelines and the establishment of VMT thresholds for CEQA analyses is linked to GHG reduction strategies and overall statewide climate change goals.

93-20

Given that the impact of transportation has shifted from congestion to climate change, the purpose of the CEQA analysis is to disclose and ultimately reduce GHG emissions by reducing the number and length of automobile trips. As part of the SB 375 land use/transportation integration process and GHG goal setting, the State and Regional Transportation Planning Agencies (RTPAs) have agreed to reduce GHG through integrated land use and transportation planning by a statewide average of approximately 15 percent by 2035. Furthermore, in its 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals, the California Air Resources Board recommends total VMT per capita rates approximately 15 percent below existing conditions.

In addition to SB 743, other legislative mandates and State policies speak to GHG reduction targets. A sample of these include:

- Assembly Bill 32 (2006) requires statewide GHG emissions reductions to 1990 levels by 2020 and continued reductions beyond 2020.

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- SB 32 (2016) requires at least a 40 percent reduction in GHG emissions from 1990 levels by2030.
- Executive Order (EO) B-30-15 (2015) sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.
- EO S-3-05 (2005) sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.
- EO B-16-12 (2012) specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.

93-20 Cont.

This direct tie with on-road mobile source GHG emission reduction goals strongly supports the application of a larger geographic area (i.e., regional, multi-county or countywide) for establishing a reasonable baseline average for CEQA purposes. Choosing a citywide average, particularly for a relatively small city, is counter-intuitive and would suggest the need for substantial evidence to support the agency's decision. By basing its' VMT threshold on a citywide average, the City of St. Helena has one of the lowest average VMTs in the region with a value of 11.34. This is 66% of the Countywide average of 17.30. VMT analysis of the project results in an average project VMT for the associated TAZ of 11.37. This is well over the threshold of 9.64, but well below (34%) the regional average of 17.30.

On a more base and fundamental perspective, basing a VMT average on a larger geographic area (i.e., regional, multi-county or countywide) is also related to generating an adequate sample size for developing a stable/meaningful baseline average. The smaller the geographic area used for averaging – the smaller the sample of geographical units used. As shown in **Figure 1**, the City of St. Helena is small and as such is represented by only six Traffic Analysis Zones (TAZ) within the Solano-Napa Activity-Based Model (SNABM). The SNABM is the operable travel demand model used to establish average VMT, VMT thresholds and project-level VMT. As basic geographic unit of analysis, each TAZ is analyzed as being above or below the citywide average. Taking the average of such a small sample of TAZs representing a small area results in little to no variation in VMT efficiency by TAZ. Using a citywide average only provides a meaningful representation when the number of TAZs are large (larger sample size) where VMT efficiency for a given land use type varies across a larger area. As an example, **Figure 2** shows the City of Santa Maria's TAZ representation that includes a much larger sample of TAZs (i.e.,100+) that demonstrate differences in VMT efficiency.

93-21

At this time, none of the other jurisdictions in Napa County have formally adopted VMT thresholds or screening criteria. However, as a gauge for how other jurisdictions outside Napa County are applying SB 743, of among approximately 30 cities that DKS is aware of, only one has chosen to implement a city-wide baseline average and it is applicable to non-residential uses only. For non-residential uses, the City of Rancho Cordova has chosen to use a city-wide baseline average given that it generates a slightly higher baseline average. This will allow the City to potentially screen more non-residential projects (office, manufacturing etc.). Conversely, for residential uses, the City of

93-22

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Rancho Cordova is using the six-county regional average as its baseline average. Hence, DKS is not aware of any city that has applied a city-wide average baseline for residential land uses.

93-22 Cont.

Figure 1. SNABM Traffic Analysis Zone Representation of City of St. Helena (not to scale)

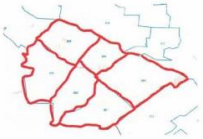
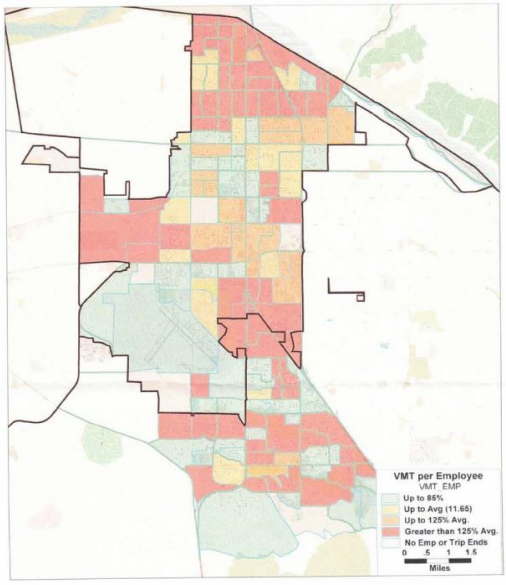


Figure 2. Traffic Analysis Zone Representation of City of Santa Maria (not to scale)



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CONCLUSIONS

The OPR provides a Technical Advisory (TA) as a SB 743 implementation guidance document to establish VMT thresholds. The laws and rules governing the CEQA process are contained in the CEQA statute (PRC Section 21000 and following), the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 and following), published court decisions interpreting CEQA, and locally adopted CEQA procedures. The TA is intended as a reference document; it does not have the weight of law. Yet, deviating from the TA is best undertaken with substantial evidence to support the agency action.

Of the project-level screening criteria established by SB 743, three could be potentially applicable to the proposed project based on reasonable alternative applications/interpretations of OPR guidance as seen in other jurisdictions of the State: project size; map-based screening; and, affordable housing. Based on how some other jurisdictions are applying SB 743, all or portions of the proposed project could be effectively screened from having to perform a VMT analysis. Also, while OPR guidance does not provide specific guidance on whether to use Citywide average or regional average VMT as an impact threshold, the existing City practice of using citywide VMT baseline average results in an unreasonable barrier to residential development on this lot. Mixed-use development is not allowed under the current zoning designation and the proposed project is currently at the lowest allowed density but still significantly over the City's directed trip generation screening criteria.

93-23

Per OPR guidance, development measured against city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the Sustainable Community Strategy (SCS) for that city because greater-than-planned amounts of development in areas above the region-based threshold would undermine the VMT containment needed to achieve regional targets under SB 375. The proposed development does not exceed the population or number of units specified in the Sustainable Community Strategy (SCS).

93-24

Applying a citywide VMT baseline average for residential uses, although within the authority of the City of St. Helena, does not align with the goals, policies, and directives of SB 743 and is generally inconsistent with how the VMT per capita performance metric is applied by some other jurisdictions around the state. Applying a regional baseline average for establishing the VMT per capita residential threshold would be more in line with the intent of SB 743 and support a finding that this Project has a less than significant traffic related impact.

93-25

Response to Letter 93
Leslie R. Perry, Law Offices of Perry, Johnson, Anderson, Miller & Moskowitz
November 1, 2021

93-1 The comment is an introduction to responses prepared by W-Trans and DKS on the Draft EIRs transportation analysis.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. the comment is noted and forwarded to the decision makers for their consideration.

93-2 The comment provides a general introduction to the VMT analysis and asserts that the VMT analysis included in the Draft EIR is conservative and does not meet the intent of current City and state polices.

Please see Response to Comment 93-8.

93-3 The comment reiterates the intent of SB 743 and quotes guidance from OPR's Technical Advisory regarding assessment of VMT impacts and the ability of the lead agency to adopt their own thresholds of significance.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

93-4 The comment reiterates OPR's recommended guidance for measuring VMT, screening criteria, and significance threshold to evaluate VMT impacts.

The commenter is confirming the approach used to evaluate the Project's VMT analysis. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

93-5 The comment reiterates OPR's recommended guidance and screening criteria to determine VMT significance.

The commenter is confirming the approach used to evaluate the Project's VMT analysis. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

93-6 The comment reiterates OPR's approach to establish VMT thresholds.

The commenter is confirming the approach used to evaluate the Project's VMT analysis. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

93-7 The comment provides results of the Napa-Solana Travel Demand Model VMT for the City and the Project's traffic analysis zones (TAZ).

The commenter is confirming the approach used to evaluate the Project's VMT analysis. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

93-8 The comment states that using the citywide average compared to the countywide average as the baseline for VMT would require mitigation measures which are not achievable for residential projects in the City.

The OPR guidance under the frequently asked questions for SB 743 Implementation section, in response to consideration of geographic boundary for VMT impacts (https://opr.ca.gov/ceqa/sb-743/faq.html#VMT-TA-regional) states that:

As used in the VMT Technical Advisory, "regional" refers to the full geography within the jurisdictional borders of a metropolitan planning organization (MPO) or a regional transportation planning agency (RTPA). Comparing a project's VMT per capita or VMT per employee to that of the entire region (i.e., MPO or RTPA) or entire city allows a lead agency to better align with the state's climate commitments. Comparison to only a portion of the region or city could result in a less environmentally protective significance threshold, potentially disconnecting significance determinations from those commitments. For example, comparing a project to only the unincorporated areas of a county, or just a select portion of a county, may exclude lower VMT areas. However, thresholds that vary by location, but where each threshold is more environmentally protective than a region- or city-based threshold, would still be aligned with state climate commitments.

Additionally, it is stated in the OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018):

Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the SCS for that city, and should be consistent with the SCS.

As mentioned in the OPR guidance, a more environmentally protective approach would be considered aligned with state climate goals. Therefore, using the citywide average (11.34 VMT per capita) as the baseline provides the city a threshold that is more conservative than the countywide average (17.30 VMT per capita). This would result in significant VMT impacts and require projects to implement mitigation measures to reduce VMT. However, it is possible that some projects may need to adopt overriding considerations if feasible mitigation measures are not available or

adequate. Future residential projects would be consistent with the City's goal of providing more housing units including affordable housing. Additionally, the residential units provided by the Project are consistent with City's General Plan, General Plan Housing Element requirements and the Plan Bay Area 2040 Regional Transportation Plan and Sustainable Communities Strategy.

93-9 The comment states that affordable housing has been identified as a strategy that can be presumed to reduce a project's VMT.

The Draft EIR notes inclusion of affordable workforce housing as part of the Project but does not estimate any associated VMT reduction. Based on OPR guidance, projects that propose 100% affordable housing can be presumed to have a less-than-significant VMT impact. Guidance for VMT reduction strategies is available in the document Quantifying Greenhouse Gas Mitigation Measures, August 2010 from the California Air Pollution Control Officers Association (CAPCOA) which has been recently updated in the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, August 2021. Per the CAPCOA 2010 handbook, a maximum of 1.2% VMT reduction is achievable by including affordable housing in a project. Per the updated 2021 handbook, integrating affordable and below market housing units is considered a supporting or non-quantified greenhouse gas and VMT reduction measure. Therefore, it is inferred that the VMT reduction due to integration of affordable housing in the Project would not reduce the Project's VMT impact to less than significant and hence is not included in the Draft EIR VMT analysis, which presents a more conservative approach.

93-10 The comment states that adopting the citywide average as the baseline for determining VMT impacts would result in all future residential projects in the City (that generate more than 110 trips per day) to result in a significant VMT impact requiring preparation of an EIR and adoption of overriding considerations. This would increase the cost to project applicants and increase the difficulty in addressing the City's need for housing.

As noted in Response to Comment 93-8, using the citywide average as the baseline provides the City a threshold that is more conservative and would require projects to implement mitigation measures to reduce VMT. However, it is possible that some projects may result in a significant and unavoidable VMT impact and need to adopt overriding considerations.

93-11 The comment explains that the commute pattern, housing affordability, and jobs/housing ratio in the City supports and meets the intent of SB 743 and achieves VMT reduction if more housing is provided in the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

93-12 The comment supports using the countywide VMT as baseline for comparing the Project's VMT per capita and concluding less than significant impact.

Please refer to response 93-8.

93-13 The comment restates that the City should consider adopting an appropriate VMT baseline for determining VMT impacts which allows the City to achieve its housing goals.

Please see Response to Comment 93-8.

93-14 The comment states that DKS analyzed consistency with City zoning and land use designations, current planning initiatives, non-market-based housing ratio and California Density Bonus Law criteria, and the Project's VMT.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

93-15 The comment is restating information from the Project description.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

93-16 The comment states that the Project is consistent with all relevant density restrictions and zoning code policies.

The commenter is correct. The Project is consistent with the City's land use designation and zoning for the site. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

93-17 The comment states that the Napa Countywide Bicycle Plan, St. Helena Pedestrian Plan, and General Plan Circulation and Climate Change sections were reviewed for policies and planning initiatives relevant to the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

93-18 The comment states the intent of SB 743 and guidance from the OPR's Technical Advisory on VMT screening and notes that the Project does not meet any of the screening criteria.

The commenter is correct. The Project was reviewed to determine if it would meet any of the screening criteria established by OPR and based on this review the Project does not meet any of the screening criteria.

93-19 The comment elaborates on the affordable housing VMT screening criteria and provides an example from the City of Goleta which allows any housing development that provides 20% non-market rate housing units, to screen out from doing a VMT analysis. The comment suggests that the City should consider such screening criteria to presume less than significant VMT impacts.

As described in Response to Comment 93-9, available methods for estimating VMT reduction by integrating affordable and below market housing units suggest that the VMT reduction achieved by doing so is either low (less than 2%) or non-quantifiable. The City has chosen to use the methodology which provides the most conservative or environmentally protective criteria and threshold to assess VMT impacts.

93-20 The comment describes the intent of SB 743 and its relationship with the state's climate change goals and lists other legislative mandates and mandates that target greenhouse gas emission reduction. The comment compares the citywide VMT and countywide VMT and suggests that regional average should be used for establishing the baseline VMT.

Please see Response to Comment 93-8 for an explanation regarding use of the citywide VMT baseline.

93-21 The comment compares the TAZ structure representing the City with a larger city such as Santa Maria and states an opinion that, in order to establish a citywide baseline threshold, there should be a larger sample of TAZs and variation in land uses.

The commenter is providing their opinion, which is not supported by the OPR guidance and recommendations, regarding the size or land uses of a city. As stated in Response to Comment 93-8, the OPR guidance has allowed the lead agency to determine whether a citywide or regional VMT should be used as the baseline and the lead agency can also choose a more environmentally protective threshold, which the City has done.

93-22 The commenter states they are not aware of any other city that has used a citywide baseline average for residential uses and that most cities within the Napa County have not formally adopted VMT threshold or screening criteria.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

93-23 The comment provides a closing statement and restates that OPRs Technical Advisory is an implementation guidance to establish VMT thresholds and suggests the OPR recommended VMT screening criteria be used for the Project's VMT analysis and reiterates using the regional baseline versus the citywide VMT.

Please see Responses to Comments 93-8, 93-9 and 93-10.

93-24 The comment confirms that the Project does not exceed the population or number of units specified in the Plan Bay Area 2040 Regional Transportation Plan and Sustainable Communities Strategy.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

93-25 The comment restates that using the citywide VMT baseline does not align with the intent of SB 743.

Please see Responses to Comments 93-8 and 93-10.

Comment Letter 94

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VIA ELECTRONIC AND U.S. MAIL

Maya DeRosa, AICP
Planning and Building Director
City of St. Helena Planning Division
1572 Railroad Ave
St. Helena, CA 94574
Email: MDeRosa@cityofsthelena.org

Re: **Comment Period for Draft EIR - Hunter Subdivision Project**

Dear Ms. DeRosa:

The applicant team has been advised that the City has extended the comment period beyond the original set date and beyond that provided for by CEQA.

We object to the extension. There is no rational basis for the extension. Given the numbers of comments received, it is apparent that the notice of the DEIR was widely viewed, and many were easily able to meet the deadline.

The only explanation is the City's continued and unjustified delay in processing the Project. The mandatory time for completion of an EIR has been egregiously ignored by the City, and this is just the latest example.

94-1

Very truly yours,

Leslie R. Perry

LRP:kh
cc: client
Andrew M. Skanchy

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Response to Letter 94
Leslie R. Perry, Law Offices of Perry, Johnson, Anderson, Miller & Moskowitz
November 8, 2021

94-1 The letter objects to an extension of the CEQA comment period and claims the City has delayed processing the Project.

Based on numerous requests from local residents to extend the Draft EIR comment period the City granted an extension of an additional 22 days. The City has not intentionally delayed processing the Project or completion of the CEQA process.

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Comment Letter 95

From: Vivian Pirchner <vivianhpirchner@gmail.com>
Sent: Thursday, November 18, 2021 2:12 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter project

I must add my name to the protest over the proposed construction of more than fifty large houses behind Vineyard Valley. It seems obvious that we will be exacerbating water problems for drinking, ground water, and waste water. The problems that will be created by routing emergency exits though the middle of Vineyard Valley are staggering to contemplate. Please consider the environmental impact report and decide against this project.
Sincerely, Vivian Pirchner

95-1
95-2
95-3

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Response to Letter 95
Vivian Pirchner
November 18, 2021

95-1 The commenter requests to be added to a list of those opposed to the Project.

The commenter has been added to a list of interested public members; however, this list does not distinguish those who support or oppose the Project.

95-2 The comment states a concern regarding the Project's impact on the City's water supply.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 2 related to water supply.

95-3 The comment raises a concern that the Project would negatively impact emergency evacuation within the area.

Please see Master Response 1 that addresses concerns associated with emergency evacuation.

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Comment Letter 96

-----Original Message-----
From: Chuck Pniower <chuckcfp@comcast.net>
Sent: Tuesday, November 16, 2021 4:34 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter subdivision

This is repose to the proposed development on the north side of Vingard Valley. I understand the the property owners have the right to develop their property. What I have concerns is the city will be able to maintain the existing utilities, fire, water sewer, pubic safety without effecting the existing residents and resources and raising costs. As things move on there is a need for housing. But for who is it for? We live in a agricultural area that are reliant on the work of what is becoming low cost labor. These people are being forced out the housing market. As I see St Helena as a liberal community, what are we to do? As I see it this is a opportunity. Do we need 51 single family homes with no open space to enjoy. This is a chance for the city to support the people that support us, from the vineyard workers, gardens, restaurant workers, house keepers. The city needs to find a balance that will support the developers and the people that give us the support and the need maintain the ambience of where we live. 96-1 96-2

Yours
Charles Pniower, 9 Del Campo Ct.
Sent from my iPad

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Response to Letter 96
Chuck Pniower
November 16, 2021

96-1 The commenter is concerned regarding the Project's impact on the City's sewer infrastructure and fire department.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

96-2 The comment acknowledges the need for housing and requests the City to find a balance in supporting developers and the community.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

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Comment Letter 97

St. Helena tallies $58 million in infrastructure projects

St. Helena Star Jun 1, 2021, updated July 19, 2021

"It's a familiar story in St. Helena: Too many infrastructure projects, not enough money."

City of St. Helena addresses complaints about water quality

St. Helena Star Mar 2, 2021, updated April 28, 2021

"St. Helena's water system id drawing more water from the City of Napa...to conserve water in St. Helena's Ball Canyon Reservoir, which is down to 40% capacity."

City of St. Helena Fails Drinking Water Standard

Patch.com April 8, 2021

"The city did not meet treatment requirements while working to disinfect the Louis Water Treatment Plant after the Glass Fire."

St. Helena approves plans for $16.2 million sewer plant upgrade

St. Helena Star Feb 23, 2021, updated Jun 9, 2021

"It's a necessary move for the city....the plant isn't capable of complying..."

The above headlines tell a story about the current state of critical infrastructure in the City of St. Helena. The most telling headline is the first - much more infrastructure is needed for St. Helena's current footprint and the City doesn't have enough money!

97-1

When you think of current (and future) infrastructure needs of the City we should consider the adequacy of:

- Water
- Sewer
- Storm drainage
- Utilities
- Police
- Fire
- Schools, and
- Other infrastructure assets

We believe the addition of 51 single family homes, 25 multifamily units, and the corresponding increase in population as contemplated by the proposed project will further strain and likely break the above infrastructure.

We are not anti-growth. In fact, we are for thoughtful growth in the City of St. Helena. However, the above headlines strongly suggest that City doesn't' have sufficient infrastructure for its current footprint let alone a project of the scope proposed. We believe that growth needs to be thoughtful and provide a means to improve (not cause further deterioration) of the City's financial condition and infrastructure.

97-1 Cont.

In addition to very serious infrastructure issues, we believe the proposed project will cause the already problematic traffic, congestion, and parking situation in St. Helena to become much worse. As you are aware, St. Helena is the only major city where Highway 29 goes directly through its downtown area. As a result, the traffic entering and exiting St. Helena via Highway 29 is truly awful. Substantially more people means substantially more traffic. People familiar with the area (or using apps such as Waze) find ways around this downtown traffic and congestion. The most common "detour" is using Silverado Trail and turning on Pope Street. Given the configuration of the Pope Street bridge and the location of the Pope Street and Silverado Trail intersection in close proximity to the proposed project, traffic will most certainly back up on Pope Street and on Silverado Trail. All of this increasing traffic and congestion as well as the lack of adequate parking detract from the quality of life of St. Helena residents.

97-2

In addition, open spaces, agricultural land and access to the pedestrian walking paths enrich and enhance the lives of all residents and particularly those most closely located near the proposed project. We watch all kinds of people (families, adults, children, and dogwalkers) enjoying the open space and vineyards on the walking path from town to the river. Often families bike together and have a picnic near the path. People walk their dogs enjoying the beautiful open space. Undeniably, the loss of open space and vineyards and safe access to the walking paths will negatively impact residents.

97-3

Often, a picture is worth a thousand words! I attach a picture from consultants for the proposed project.
Do we really want the outlined area to be developed as proposed? We believe most residents say no.
We respectfully urge the council to not proceed with the proposed project. 97-4

Patrick and Laura Pohlen

601 Fulton Lane

Response to Letter 97
Patrick and Laura Pohlen

97-1 The comment refers to the City's infrastructure and states an opinion that improvements are needed before the City can approve new development. The comment mentions general concerns related to the following topics: water, sewer, storm drainage, utilities, police, fire, and schools and states an opinion that City's infrastructure cannot handle the increased Project demand.

Impacts regarding public utilities and public services are addressed in Sections 3.12 and 3.13 of the Draft EIR. Please see Master Responses 1, 2 and 4 regarding the ability of the City's police and fire departments to serve the Project, and water and wastewater infrastructure. See also Response to Comment 14-4 related to public services.

97-2 The comment raises concerns related to the Project's impact on traffic congestion and parking.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. Please see Responses to Comments 10-2 and 36-2 that address general traffic concerns.

97-3 The comment states an opinion about the advantages of maintaining open space and opines that the loss of the site's open space will negatively impact residents.

The Project site is privately owned and is therefore not a public open space. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

97-4 The comment provides an aerial image of the project site and asks the City to reject the Project.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

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Comment Letter 98

-----Original Message-----
From: Charlotte Powell <charlottecora@gmail.com>
Sent: Sunday, October 31, 2021 3:17 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision

To whom it may concern:

Please do not approve the Hunter Subdivision. The open space, and field provide homes to so many local wild plants and animals. I have often seen a plethora of birds, foxes and coyote in that field on early morning walks. We have far too open spaces like that for people to enjoy in town. Please do not build there!!!! 98-1

Thank you for your time.

Charlotte Powell

Sent from my iPhone

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Response to Letter 98
Charlotte Powell
October 31, 2021

98-1 The comment states opposition to the Project due to potential impacts to wildlife and open space.

Please see Section 3.4 of the Draft EIR and Responses to Comments 14-2 through 14-6, 55-3, 121-28 and 121-32 for more information on impacts to wildlife and habitat.

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Comment Letter 99

From: Lisa Redmon <lisa@redmonwines.com>
Sent: Thursday, October 28, 2021 12:22 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunt Street Project

Hello, My name is Lisa Redmon and I am a 45 year local to St. Helena. For the last 20 years I have lived at 1185 Starr Avenue which is at the corner of Hunt and Starr. I am learning that the single family home project across the street from my house is going up for approval again. I've got several concerns: 99-1

1. The flooding and water issues - I know this was one of the key reasons the project was turned down prior. I assume the same issue is at play now which is very worrisome. What is different this time around? How can there possibly be enough water as we are already rationed. 99-2
2. I evacuated for the 2021 fire and am worried about traffic is this happens again. 99-3
3. Parking is already a mess on Starr Avenue due to the existing low income housing. I'm on the corner and have absolutely no parking by my house. Especially during harvest seasons when folks are here to work. There is really no room for more overflow parking which we have seen happens. The parking in the the existing low income housing is tandem which also contributes to folks needing Starr Ave. 99-4
4. ALL of the low income housing is packed into the same area of St. Helena. It does not seem right to put more instead of spreading it out a bit. I think it will affect our neighborhood more than it already has. 99-5

Regards,

Lisa Redmon
Owner, Redmon Wines
www.redmonwines.com
707-235-0282

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Response to Letter 99
Lisa Redmon
October 28, 2021

99-1 The comment provides the commenter's personal history as a resident of the City.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

99-2 The comment raises concerns about flooding and water supply and states that previous projects were rejected due these considerations.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Please see Master Responses 2 and 3 related to the Project's water supply and potential flood-related impacts.

99-3 The comment raises a concern about emergency evacuation in the event of a fire.

Please see Master Response 1 addressing concerns regarding emergency evacuation.

99-4 The comment raises a concern regarding the Project's impact to parking.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required.

99-5 The comment states an opinion that low-income housing should be spread out throughout the City, rather than concentrated in one area.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 100

From: Greg Reynolds <greynoldsmail@gmail.com>
Sent: Friday, November 5, 2021 2:34 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Written Comments on The Hunter Subdivision Draft Environmental Impact Report SCH # 2018032014

Please add

Good Evening

I am Greg Reynolds, 290 Pope Street St Helena

I am the managing partner for Vineyard Valley Mobile Home Park.

Thank you

There are a myriad of concerns we have about the Hunter Project.

As our residents understand more about the project topics of impact are significant and across the board from levee access and levee maintenance to vista and privacy concerns the electorate here in VV is not happy.

100-1

There are so many mitigating circumstances raised in today's current environment around water, fire safety, emergency response, traffic to name a few that your job as City Planners and perhaps City Council members makes it all the more critical that evidence doesn't get ignored. You have a tough job you need to forecast where a project like this takes the citizens of Vineyard Valley and the greater City of St Helena.

I will focus just on three issues tonight

- Emergency Evacuation
- Water specific to Sewer Discharge
- Traffic

100-2

Vineyard Valley is a Retirement Community 55 and older approximately 218 homes When everyone is home, The park is home to 350 people, many are retired seniors.

After the last 5 years and last year with the Glass Fire We have spent more time each year focused on fire suppression, readiness and safety....this year primarily in neighborhood reach and resident evacuation in the event of emergency.

100-3

After the devastating floods of 86 and 95 the park was transformed with a significant investment in the Flood Wall Project. The design and building of that project attempted to mitigate the flood plane realities **with the Flood Wall, the levee and holding pond and pumps.** The deployment

100-4

of that significant investment did not include the construction referenced here. **Hunter Project** was not part of that plan and the safety it proposed to deliver. 100-4 Cont.

We are very concerned that a safe evacuation and access through the back of the park will disappear with this project. We are concerned that the construction will undermine the levee and overwhelm the Army Corp Strategy put in place to protect our 350 residents and their homes. 100-5

We are concerned about water as many have commented. As we all engage to participate in phase 2 this concerns us greatly. 100-6

We will comment in writing specifically about wastewater flows and what appears to be a plan to connect a portion of the **Hunter Project** to Vineyard Valleys waste water discharge sewer. This is a City sewer that is documented to have significant issues when it does rain. The majority of the Hunter Project single family homes 46 out of 51 will be connected to the VV sewer. We will be getting most of this sewer flow. Taking into account the multi-family units as well almost 75% of the total project discharge is directed our way. Our VV sewer is already overtaxed, this will clearly drown this infrastructure. As in other parts of the City this is unacceptable and expensive as the City spends and documents every clean up situation. 100-7

The traffic data clearly demonstrates significant challenges for our senior contingent. In the DEIR It is clear from the table the Proposed Project Transportation Demand Management (TDM) strategies would result in a **Project VMT to be 15.2 %** higher than the City wide VMT per capita. Draft EIR concludes and clearly states that the Proposed Project has a significant and unavoidable impact, **then it is our opinion that the council has an obligation to the citizens of St Helena to protect their environmental integrity and vote to deny acceptance of the Draft EIR.** 100-8

Thank You

Response to Letter 100
Greg Reynolds
November 5, 2021

100-1 The comment serves as an introduction to the commenter and notes numerous concerns about the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

100-2 The comment states three areas of concern: emergency evacuation, water/sewer discharge, and traffic.

Please see Master Response 1 for information on emergency evacuation concerns and Master Response 4 for information specific to wastewater. The comment does not indicate any specific concerns regarding traffic or where the Draft EIR analysis is inadequate; therefore, no further response can be provided.

100-3 The comment introduces the Vineyard Valley Mobile Home Park and asserts that the mobile home community has spent an increasing amount of time focused on fire suppression, readiness, and safety.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

100-4 The comment states the Project was not part of the City's Flood Protection project.

Please see Master Response 3 that addresses the Flood Protection Project in relation to this Project.

100-5 The comment expresses a concern about emergency evacuation for Vineyard Valley residents and harm to the levee from Project construction.

Please see Master Response 1 for additional information on emergency evacuation concerns and Master Response 3 for information on the Napa River levee (or the City's Flood Protection Project).

100-6 The comment states the commenter's concern about water conservation.

Please see Master Response 2 for more information on water supply.

100-7 The comment states an opinion that connecting the Project to the Vineyard Valley wastewater discharge sewer would overwhelm the sewer system.

Please see Master Response 4 which addresses this concern in detail.

100-8 The comment states an opinion that, because the Project's VMT is estimated to exceed the City wide VMT per capita and would result in a significant and unavoidable impact, the Project should be denied.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

Comment Letter 101

November 2, 2021

St. Helena City Planning Department
St. Helena, CA 94575

Dear Members:

I am writing as a resident of St. Helena with my concerns and opposition to the Planning Commission and City Counsel's continued support and consideration of the development of the Hunter Project. The community at large has been in opposition to this proposal for many years now. It is for the benefit of the developer and provides no positive contribution to the community. 101-1

There are so many environmental concerns and potentially negative effects to the land, the community as well as the negative impact on short and long term fire and flood control. I will address some items that come to mind here that should be specifically addressed, hopefully with studies completed as applicable, before any approval of the DEIR. I will list them in the order of the Environmental Impact Report Chapters. 101-2

1. Aesthetics/Visual. I would think this speaks for itself. Two story homes in this cluster will eliminate any vista for residents in Vineyard Valley MHP, in addition to any visitors/residents walking the current open space. My understanding of allowing development as part of the affordable housing initiative is that ALL the accommodations should be of similar design and appearance with the affordable housing scattered throughout, to eliminate the stigma and obvious segregation associated with clustering. This plan appears to be a very upscale home development using over 80% of the land for 56% of the total housing. This *is without* figuring in the 24 "granny unit" apartment/condos in these percentages, which really benefit again the owner of the upscale home on which these units are located. 101-3

   Another factor which impacts aesthestics is the long term (6 years plus) construction. 101-4
   Aside from the visually offensive nature of long term construction, there is the consideration of the traffic impact to residences and businesses. This is not a small project. This will have a huge impact, affecting local residents and deterring visitors, which, in turn, affects revenue. And, what about the actual road damage the city incurs from this long term project? The number of heavy equipment vehicles and substantial increase WILL impact the quality of our road surfaces as well as the flood plain area itself. Who pays for that? 101-5

2. Agricultural and Forestry Resources: Loss of prime agricultural vineyards. What impact will this development have on the current riparian preserve? 101-6

3. Air Quality: there is the extensive construction vehicle/machinery impact for years and the addition of an approximate 100-200+ vehicles for residency, averaging only a maximum of 2 per household. 101-7

4. Biological Resources: there are so many studies on this subject that support the damage from human development. This is just an excerpt from one: The emerging field of Conservation Physiology links environmental change and ecological success by the application of physiological theory, approaches and tools to elucidate and address conservation problems. Human activity has changed the natural environment to a point where the viability of many ecosystems is now under threat. Philos Trans R Soc Lond B Biol Sci. 2012 Jun 19; 367(1596): 1607–1614. *Conservation Physiology may be defined as the application of physiological theory, approaches and tools to elucidate and address conservation problems with the aim to provide a mechanistic understanding of how environmental disturbances and threatening processes impact physiological responses and thereby ecological function, population persistence, and species survival.* 101-8

5. Cultural and Tribal Resources: has there been a study/archeologic study done on this land? A tribal burial ground has been defined in adjacent land. 101-9

6. Geology and Soils: The levee has not been maintained since 2010. Note the fresh gopher holes on the side facing Del Rio. Significant rodent activity in the levee. Concerned about liquification of alluvial soils. Think of what happened to the levees during Hurricane Katrina. 101-10

7. Greenhouse Gas Emissions: vehicles, as mentioned above; construction, as mentioned above. There should also be consideration given to the global warming effects from additional roadways, home emissions and reflection, reduction of absorbing land surface. 101-11

8. Hazards and Hazardous Materials: Hazards. The open space provides a buffer to manage and help control fires. Homes and vehicles in the area is fire fuel. This greatly increases the potential for flooding as this is currently again a buffer. With homes there, there would be damage in a flood with substantial financial loss to city, personal and other agencies. It also creates a bigger potential for fire and flood threat to existing Vineyard Valley homes as they lose this buffer. 101-12

9. Hydrology and Water Quality: *Def: noun the branch of science concerned with the properties of the earth's water, and especially its movement in relation to land.* Contruction of this magnitude is reducing the ability for natural water saturation and flow. Again, contributing to higher potential for flooding and causes a higher rate of run off of natural soils that remain (No.8). 101-13

10. Land Use: Refer to the question regarding unauthorized changes to the intended use of the land as certified by the ACOE below. The proposed Affordable Housing violates Municipal Code 1741 101-14

in that it has been segregated from the other residences and appears to be significantly different. 101-14 Cont.

11. Noise and Vibration: This category is really spread over several – light noise, traffic noise, general vibration/shifting of the natural landscape from the various facets of development including but not limited to shifting, removal of soil and topographic natural flow, extensive road materials being cleared and laid. General construction noise estimated to last a minimum of 6 years. 101-15

12. Public Services and Recreation
    Our police and fire, emergency services, and schools will be impacted, putting a strain on services. 101-16
    The walking trails are used by many people from all over St. Helena. My understanding was the intended purpose of the land was to remain open space for both public enjoyment and long term safety regarding both flood and fire. 101-17

13. Utilities and Service Systems: City water, sewer have limitations. We are currently in a severe drought situation. The approval of development of this magnitude does not serve the city or its residents. The costs alone will ultimately be absorbed by current residents, at least partially. The pandemic has greatly impacted the small businesses in this area. Adding a project of this size will mean streets being torn up, traffic congestion the city plan does not have the capacity to handle and a greater reduction of visitors and revenue for many years. It is very easy for travelers to choose Sonoma or other destinations, especially in light of today's instant information and reviews available via the internet. 101-18, 101-19, 101-20, 101-21

14. Transportation and Circulation: I would think self-evident. As mentioned above, these are just a few of the impacts I can think of. I am sure there are many more. 101-22

15. Energy: We have had so many varieties of energy emergencies using PGE as an example. Older lines, older transformers to name two that are current observations. Homes in Vineyard Valley have not had power for the past week. What is the plan to update an infrastructure to support the current needs incorporated into an expansion of this magnitude? And who pays for that? 101-23

In addition to the items of concern that are either overlooked or not included as part of the DEIR, I am attaching just a small item from part of the Army Corps of Engineers Policy and Procedures: my understanding is that the flood plain project had to be approved and certified by the ACOE. The Hunter Project seems to be in direct violation of this. 101-24

Excerpt taken from an ACOE Policy and Procdure document:

Water Resources Policies and Authorities POLICY AND PROCEDURAL GUIDANCE FOR PROCESSING REQUESTS TO ALTER US ARMY CORPS OF ENGINEERS CIVIL WORKS PROJECTS PURSANT TO 33 USC 408

j. Unauthorized Alterations. The policy of USACE is to pursue enforcement and correction of unauthorized alterations of covered projects. If an unauthorized alteration is discovered, the district, after consulting with the Offices of Counsel and Real Estate, should take the appropriate steps to remedy the unauthorized alteration. The Chief of Regulatory should be notified of any unauthorized alterations so the appropriate course of action can be taken with respect to Section 10/404/103 permits. Specific enforcement steps the district takes will depend on the particular nature of the unauthorize d alteration and whether the unauthorized alteration is located on project boundaries where a non-federal sponsor holds the land rights for operations and maintenance. Non-federal sponsors with operations and maintenance responsibilities for the USACE project, reference paragraph 6.e.(1), remain responsible for ensuring no unauthorized alterations are occurring within the project boundaries. k. Authorized Project Purpose. **No granting of permission is allowed under Section 408 for a proposed alteration that would have an effect of deauthorizing a project or eliminating an authorized project purpose.**

I am sure there are so many items I am neglecting to address, but I hope these will have some weight in your recognizing that this developmental plan is not in the best interest of our community and approval of same would not be serving the public need nor interests.

101-24 Cont.

101-25

Response to Letter 101
Ringenberg
November 2, 2021

101-1 The comment is opposed to the Project and states an opinion that it would provide no positive contribution to the community.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-2 The comment states an opinion that there are many environmental concerns that would arise from the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-3 The comment states an opinion that two-story homes would eliminate views of scenic vistas for Valley Vineyard residents and any pedestrians who use the open space area and the Project seems to be an upscale development.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision -makers for their consideration.

101-4 The comment states an opinion that long-term construction of the Project would impact aesthetics.

Short-term visual construction-related impacts are not evaluated because the impacts are temporary and would not result in any long-term, permanent impacts. Please see Responses to Comments 7-6 and 84-9 that address potential aesthetic impacts.

101-5 The comment states an opinion that Project construction would cause traffic impacts and damage roads.

The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required.

101-6 The comment asks what impact the Project would have on the current riparian reserve.

Impacts to riparian habitat are discussed in Section 3.4 of the Draft EIR. Please see also Response to Comment 14-2 that addresses impacts to riparian resources.

101-7 The commenter states an opinion, related to air quality, that there is an extensive amount of construction vehicles and heavy-duty construction equipment resulting in approximately 100-200 vehicles for residency, averaging a maximum of two per household.

It is unclear if the commenter is stating construction of the Project would generate 100-200 vehicles relative to the number of proposed residents. However, as discussed in Section 3.3, Air Quality, the construction equipment mix used for estimating the construction emissions of the Proposed Project is shown in Table 3.3-5 of the Draft EIR. Notably, because detailed specific information regarding the construction equipment fleet is unknown at the time of analysis, the analysis is based on the default construction equipment fleet provided by California Emissions Estimator Model (CalEEMod) which is based on land use information such as the number of dwelling units to be developed. Furthermore, construction tabs within CalEEMod contain default information that was obtained from a survey of other construction sites conducted by the South Coast Air Quality Management District. The construction survey data is grouped by construction phase and lot acreage. The default construction equipment list and phase length data were determined to be the most appropriate for the size and types surveyed. Regarding vehicle trips generated by operations, trip generation of the Project was based on the Traffic Impact Study. Overall, construction and operations of the Project would not exceed the air district's significance thresholds, as presented in Tables 3.3-8 and 3.3-9 in the Draft EIR, and impacts would be less than significant.

101-8 The comment includes an excerpt which states that human activity has changed the natural environment to a point where the viability of many ecosystems is now under threat.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-9 The comment asks whether an archaeologic study has been performed at the Project site and asserts that a tribal burial ground was identified at adjacent land.

The analysis conducted for the Draft EIR included a very thorough evaluation of the potential for subsurface cultural resources, as well as human remains to be present. As noted on page 3.5-23, "a Cultural Resources Inventory and Extended Phase I and Phase II Report was prepared for the Proposed Project in March 2020 (Appendix E). The inventory included a review of the CHRIS records search provided by the NWIC, NAHC sacred lands file search, Native American coordination, historic research, an intensive pedestrian survey, XPI investigations, Phase II excavation, and ground penetrating radar. The study also reviewed historical aerials and topographic maps. The

CHRIS records search included a review of their collection of mapped prehistoric, historical and built-environment resources, Department of Parks and Recreation (DPR) Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources included the NRHP, California Inventory of Historical Resources/CRHR and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and Caltrans Bridge Survey information."

Please see also Response to Comment 55-4.

101-10 The comment asserts, without providing evidence, that the levee has not been maintained since 2010 and that there is significant rodent activity in the levee. The comment also brings up a concern about liquification of alluvial soils.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. Please see Master Response 3 regarding the levee.

Liquefaction impacts are discussed in Section 3.6 of the Draft EIR. Mitigation measure GEO-1 requires prior to the issuance of any site-specific grading or building permits, the Project applicant shall have a design-level geotechnical report prepared and submitted to the City for review and approval in accordance with adopted City standards. The proposed structural building designs are also required to adhere to the currently adopted version of the California Building Code, which includes standards for seismic safety related to soil stability.

101-11 The commenter states an opinion that, due to the increase in vehicular traffic, the global warming effects from additional roadways, home emissions, reflection, and reduction of absorbing land surface should be considered. In addition, the comment appears to address two separate issues: changes in GHG emissions from Project activities, and what is often referred to as the "urban heat island effect" resulting from land use changes. Both issues are addressed below.

GHG emissions related to Project construction and operation, including vehicular emissions, is discussed under Impact 3.7-1 on page 3.7-30 of the Draft EIR. The Project would result in estimated GHG emissions of 815 MT CO_2e per year, which would be a cumulatively less-than-significant GHG impact. The GHG analysis also increases the potential for CO_2 emissions due to the loss of agriculture land (loss of carbon sequestration). The proposed landscape plan includes planting approximately 185 trees, including scarlet maple (*Acer Rubrum*), Chinese pistache (*Pistacia Chinensis*) and tulip tree (*Liriodendron Tulipifera)*. Furthermore, an approximately one-acre portion of the existing vineyard within the project site would remain. The California Emissions Estimator Model (CalEEMod) includes carbon content values, which are based on Intergovernmental Panel on Climate Change (IPCC) reports, to estimate the loss of sequestered carbon (release of CO_2). For cropland, which would be the closest land use associated with the existing vineyards, removal of cropland

would result in a rate of 6.2 MT CO_2/acre. Regarding carbon sequestration from the planting of a variety of tree species, the Project would result in a sequestration rate of 0.0354 MT CO_2/tree/year assuming growth over 20 years. Therefore, the Project would result in an overall gain in sequestered carbon, reducing the Project's overall GHG emissions presented in Table 3.7-6 of the Draft EIR.

Regarding the potential for increased temperatures due to additional roadways and structures, this effect is typically associated with high density urban development, rather than the more suburban densities typical of the project area. Furthermore, these effects are localized, rather than contributors to global warming. Heat islands are most commonly addressed through the planting of street trees. As discussed above, the Project would plant approximately 185 trees. There is no evidence that the Project would contribute to an adverse environmental impact due to any heat island effect.

101-12 The comment states an opinion that the current open space area provides a buffer to wildfires and that the Project would create a bigger potential for fire and flood threat to existing Vineyard Valley homes.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 regarding flooding concerns.

101-13 The comment states an opinion that the Project would reduce the ability for natural water saturation and flow, contributing to a higher potential for flooding and runoff of natural soils.

Please see Response to Comments 35-4 through 35-6.

101-14 The comment states an opinion that the Project violates Municipal Code 1741, since affordable housing would be, in the commenter's opinion, segregated from other residences and appears to be significantly different from market-rate units.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. In addition, the commenter appears to be referencing an incorrect section of th City's Municipal Code bcasue there is no section "1741". It is assumed the commenter is referring to chapter 17.146 of the Municipal Code that addresses affordable housing. Please see Response to Comment 45-2.

101-15 The comment states an opinion that the Project would cause traffic and construction noise, and vibration which would shift soils and impact natural water flow.

The Project's impact on transportation and circulation is addressed in Section 3.14. Noise and vibration impacts are discussed in Section 3.11 and hydrology impacts are

discussed in Section 3.9. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-16 The comment states an opinion that the Project would strain police, fire, and emergency services, as well as schools.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-17 The comment states an opinion that the intended purpose of the land was to remain open space for public enjoyment and safety from floods and fire.

The Project site is not publicly owned and is therefore not a public open space. In addition, the Project site has been designated and zoned for residential development dating back to the 1975 General Plan. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-18 The comment states an opinion that City water and sewer services have limitations and that the City is currently in a severe drought situation.

Please see Master Response 2 regarding water supply and Master Response 4 regarding sewer capacity.

101-19 The comment asserts that the cost of the Project would be absorbed by current residents.

The CEQA Guidelines do not require the fiscal or economic costs of a project to be evaluated, unless they could indirectly result in result in significant physical changes in the environment. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-20 The comment states an opinion that the Project would result in traffic congestion and damage to streets.

The commenter’s opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required.

101-21 The comment suggests that the Project would result in a reduction in the number of visitors to the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-22 The comment states an opinion that there would be transportation and circulation impacts.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the EIR or analysis is inadequate; therefore, no further response is required. The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. The analysis includes consideration of motorized vehicle traffic impacts on roadway capacity, vehicle-miles traveled (VMT), and potential impacts to transit, bicycle, and pedestrians.

101-23 The comment states an opinion that the City has had many energy-related emergencies and asks if the City has is a plan for infrastructure updates to support current needs as well as the Proposed Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-24 The comment states an opinion that the Project is in direct violation to the Army Corps of Engineers Policy and Procedures document.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

101-25 The comment states an opinion that the Project is not in the best interest of the community.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

Comment Letter 102

-----Original Message-----
From: jim ritchie <carrottopone@yahoo.com>
Sent: Monday, November 1, 2021 3:42 PM
To: Public Comment <publiccomment@cityofsthelena.org>
Subject: [External] Hunter Project

My two main concerns are the scarcity of water sources for the town at the present time. With this many new dwellings, where is the added water coming from? You can only retrofit so many toilets. What if the developer could also retrofit dishwashers/washing machines (replace with a percentage or rebate of new water wise units paid for by said developer? Is the new norm now on/off showers, no vegetable or fruit gardens, dead landscaping, saving grey water to keep plants alive? If this project does move forward, maybe some of the conditions should be all drought tolerate landscaping, no to pools using city water, putting in grey water systems for all landscaping. 102-1

My second concern is traffic. If Adams and Starr are extended but Adams doesn't cross over to the Trail the traffic just impacts all the current residential streets. Adams and Hunt become feeders to Pope Street along with Church, Edwards, Jiune, which are already very well travelled. We've all seen what traffic is like when part of the Trail is shut down and now maybe with this development an additional 200 vehicles with no new exit out of town but the current residential streets surrounding this project. 102-2

With the added vehicles comes over flow parking into existing neighborhoods as is evident with Hunts Grove and the multi units on Monte Vista. 102-3

It just seems that this many units is going to decrease the quality of living in St. Helena by those in close proximity to this proposed development. 102-4

Jim Ritchie
830 Hunt Ave
963-3836

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Response to Letter 102
Jim Ritchie
November 1, 2021

102-1 The comment expresses the commenter's concern regarding the Project's impact on the City's water supply and suggests regulating the Project's water usage.

Please see Master Response 2 that addresses the City's ability to supply water to the Project and the Project's compliance with City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the City's Municipal Code.

102-2 The comment expresses the commenter's concern related to the Project's impact on local traffic. Specifically, potential traffic impacts to Pope Street.

Please see Response to Comment 57-11.

102-3 The comment addresses the Project's impact on parking availability.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required.

102-4 The comment states opposition to the Project because it would, in the commenter's opinion, decrease the quality of life for St. Helena residents.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 103

From: Vivian Robison <vivian.robison@gmail.com>
Sent: Thursday, November 4, 2021 1:39 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Opposition to the Proposed Hunter Subdivision per DEIR

Dear Ms DeRosa,

My husband and I have lived in St Helena for 47 years with the last six years as residents of Vineyard Valley Mobile Home Park. We are strongly opposed to the development of the proposed Hunter Subdivision for just a few of the following reasons specific to the DEIR found on the City's website: 103-1

1. Geology Soils Wildlife Recreation: Building and paving behind a levee will most certainly result in levee failure by taking away the permeable soil drainage. The runoff from rainstorms will have no where to go but to overwhelm the river, overtake the levee, and cause severe flooding. 103-2 This massive subdivision will eliminate our open space fire break, encroach on agricultural land, negatively impact our viewscape, diminish our sacred greenbelt, destroy the wildlife habitat of the river, and deprive all of us and future generations of the beauty of nature. 103-3

2. Hydrology Utilities Public Services: There is also the higher elevation of the subdivision such that their runoff will have immediate flooding impact on neighboring Vineyard Valley where we live. Our streets will flood and damage our homes, cars, and personal property. Emergency Services will be unable to rescue everyone off their roofs in the event of flooding. Sewage will back up right down Paseo Grande, the main street of Vineyard Valley, and threaten our health, safety, and welfare. Wildfires and floods will potentially knock out the power. 103-4 Excess energy consumption from the subdivision will most certainly burden the power grid and the high density population will over consume water. 103-5 Prolonged construction will torture neighbors with increased heavy equipment traffic, noise, vibration, light pollution, and affect our air quality with dust and off gassing contaminants for the several years it is projected to take and beyond. 103-6

3. Transportation Circulation: This high density subdivision will not have through street capability to Silverado Trail so the lack of traffic flow will create immense traffic congestion in our neighborhood and tax the already much over used aging Pope Street Bridge. 103-7 The intersection at the bridge and trail is a tremendous safety hazard with more traffic accidents sure to happen. Again Emergency Services will have extreme difficulty in navigating the traffic to get to Vineyard Valley. Additionally the subdivision will clearly obstruct our evacuation exit to Adams Street because traffic congestion will prevent us from exiting via Pope Street. 103-8

The Hunter Subdivision is an oversized market rate housing development and should be rejected in its entirety. We St Helenans deserve better, we deserve a legacy with a conscience not of greed. 103-9

Respectfully,
Vivian L Robison
35 Redondo Ct
St Helena CA 94574-1251
Cell 707 337-9352
Email vivian.robison@gmail.com

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Response to Letter 103
Vivian Robison
November 4, 2021

103-1 The comment serves as an introduction to the commenter and their opposition to the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

103-2 The comment states an opinion that construction behind the levee would result in levee failure by taking away permeable soils.

Please see Master Response 3.

103-3 The comment states an opinion that the Project would eliminate an open space fire break, encroach on agricultural land, negatively impact views, destroy wildlife habitat, and remove the existing walking trail.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

103-4 The comment states an opinion that the higher elevation of the Project would result in runoff waters flooding the Vineyard Valley Mobile Home Park and threaten health and safety.

Please see Responses to Comments 35-4 through 35-6.

103-5 The comment states an opinion that excess energy and water consumption from the Project would burden the power grid and water supply.

Potential impacts regarding energy, public utilities, and water are discussed in Sections 3.15, Section 3.13, and Section 3.9, respectively. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. Please see Master Response 2 regarding water supply.

103-6 The comment states an opinion that construction of the Project would disturb neighbors with noise, vibration, light pollution, and air pollution.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. However, please see Response to Comment 38-1 that addresses these concerns.

103-7 The comment states an opinion that traffic congestion and overall vehicular safety within the neighborhood would worsen as a result of the Proposed Project and that an additional connection to Silverado Trail would be needed.

Overall safety and vehicular collisions within the City were analyzed within Section 3.14 of the Draft EIR and Project impacts were concluded to be less than significant. Please see Response to Comment 57-11 for additional information regarding the extension of Adams Street to Silverado Trail.

103-8 The comment expresses an opinion that emergency services would have difficulty in navigating within the City as a result of the Proposed Project and that emergency evacuation along Adams Street and Pope Street would be reduced.

For additional information regarding emergency vehicle access and evacuation, please see Master Response 1.

103-9 The comment states an opinion that the Project is an “oversized market rate housing development” that should be rejected.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter’s opinion is noted and forwarded to the decision makers for their consideration.

Comment Letter 104

From:	Linda Rose <linda@mgrose.com>
Sent:	Monday, October 4, 2021 4:22 PM
To:	Public Comment
Subject:	[External] Hunter Project

Dear Planning Commission,
Please do not approve the Hunter Project. It was turned down before, because it is such an ill-advised project. We don't have the water for it. We don't want, and can't handle the traffic it would generate. It's in the wrong place, where nothing should be build. And it is much too big for our town.
Sincerely,
Linda Rose
St. Helena

104-1

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Response to Letter 104
Linda Rose
October 4, 2021

104-1 The comment states opposition to the Project and raises concerns regarding the availability of water to serve the Project, traffic generation, and size of the development.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the EIR or analysis is inadequate; therefore, no further response is required.

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Comment Letter 105

-----Original Message-----
From: Alexandrine Venezia <eretz5660@gmail.com>
Sent: Saturday, October 30, 2021 7:04 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision Project protest

To the Building and planning Director
How can such a project be presented, when there are currently such restrictions on the use of water for us residents of st Helena. How can this be omitted? We are told an even worse future. City Hall penalizes residents financially because there has been no serious planning for water management and apparently it is even worse for the future. So I hope that this will be taking in consideration in the protest against that project. 105-1

A Venezia Rouas

Sent from my iPad

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Response to Letter 105
A. Venezia Rouas
October 30, 2021

105-1 The comment states opposition to the Project regarding the Project's water usage and references water restrictions for City residents.

The commenter's opinion is noted and forwarded to the decision makers for their consideration.

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Comment Letter 106

From: Schlatter, Laurence <lschlatter@merryvale.com>
Sent: Sunday, November 14, 2021 9:33 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Opposition to proposed Hunter Project

Dear Mrs De Rosa,

As a resident of Starr Avenue for the last 23 years, I am writing to express my opposition to the Hunter Project. 106-1

With the current water shortage, it is unimaginable to think that such a big development could take place in our town. Also, the extension of Starr Avenue would turn our safe, and kid/pet friendly neighborhood into a high traffic and dangerous street. 106-2

Also, it would destroy one of St Helena's resident's favorite walking trail. A special place where families, kids, seniors and others have a chance to connect with nature, and enjoy the river. 106-3

In case of a natural disaster, what is your evacuation plan for so many people? 106-4

It is shocking to me that this project can be proposed once again, knowing that the majority of this town is clearly opposed to it. 106-5

Respectfully,

Laurence Schlatter
1183 Starr Avenue
Saint Helena

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Response to Letter 106
Laurence Schlatter
November 14, 2021

106-1 The comment expresses opposition to the Project and explains the commenter's history as a resident of the City. The comment also raises a general concern, stating an opinion that the City is under a water shortage.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration. Also, please see Master Response 2, which addresses the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

106-2 The comment expresses a concern related to the Project's impact on traffic and pedestrian safety.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required.

106-3 The comment states an opinion that the Project would remove a popular walking trail.

The Project does not propose removing the existing trail or levee maintenance road, as explained in Section 3.12, Public Services and Recreation on page 3.12-17 and on page 2-23 in Chapter 2, Project Description. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision makers for their consideration.

106-4 The comment raises a general concern related to emergency evacuation.

The comment is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, in response to the commenter's concern related to emergency access and evacuation, please see Master Response 1.

106-5 The comment expresses general opposition to the Project and claims that many residents are also opposed to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 107

From: John Schoof <jpschoof@comcast.net>
Sent: Saturday, October 30, 2021 11:33 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Patricia N. Schoof <pnschoof@comcast.net>
Subject: [External] Hunter Subdivision Project concerns

Dear Ms. DeRosa:

I missed the public comment period in 2018 as we were new to the area during that time. However, I want to share my perspective of the Hunter Subdivision Project. With the drought conditions we are experiencing, my initial reaction to the project is that it should be deferred until a more abundant and sustainable water supply is available; one that can support existing and future potable water demand for Saint Helena. The ideas that follow are my concerns with the project, along with some suggested solutions that collaterally provide some additional benefits in the City of Saint Helena. 107-1

Preserve the vineyards

There are two healthy, productive, and beautiful vineyards on the proposed development site, and as you are aware, those vineyards are also bordered by additional vineyards to the north. While it is not a city park, it seems to get visited by dozens of residents each day – residents out for their daily strolls, residents walking their dogs, and children riding their bikes or flying kites. To me this is part of the charm of Saint Helena. Let's preserve that which is a foundation of the county and city in which live and that we thoroughly enjoy. 107-2

I understand that the owners of the property desire to monetize their investment. I also assume that if only half of the land was developed for housing, that the economics might not work for the developers. Perhaps there is a solution away from greenfield development on the planted/producing land to an infill development within the City of Saint Helena. I have often thought to myself that the land on Mitchell Drive (behind the Umpqua Bank) might be a great location for high(er) density/affordable housing that is closer to shopping and main vehicle traffic lanes. A conceptual solution would be for the City of Saint Helena to acquire the Mitchell Drive property(ies) and exchange it for the vineyard land at the end of Starr Avenue; the Hunter Subdivision Project developers could then develop affordable housing off Main Street and Mitchell Drive and the City of Saint Helena could put the vineyards into a land trust to protect them for perpetuity (and enjoy the benefits of positive cash flow from a long-term lease of the vineyards). 107-3

Integrate safer vehicle traffic patterns

Starr Avenue, running from Pope Street to Hunt Avenue is already used as a bypass route to downtown Saint Helena. There is a current child safety iss due to the number of vehicles that ignore the stop signs at the intersection of Hunt Avenue and Starr Avenue. In addition, along with Meadowcreek Circle the two streets accommodate an abundance of overflow parking for the Hunt's Grove Apartments. 107-4
The current proposal to extend Starr Avenue to intersect with an extension of Adams Street would exacerbate the current traffic, child safety and parking situation. 107-5

If only the land in the unplanted portion of the Hunter Subdivision Project was developed, the development could be accessed via an extension of Adams Street (only) without a tie-in from Starr avenue such that Adams Street could (someday) be extended over the Napa River to intersect the 107-6

Silverado Trail. From the Adams Street extension, among the requisite streets required for the project, the developer could incorporate a feeder street built behind the east end of the preserved vineyards. This street would also be configured to provide a second vehicle access to the Hunt's Grove Apartments. Finally, within the Hunt's Grove Apartment's property, provide a secondary rear parking solution for the tenants and their guests (I believe that part of that parcel is already owned by the City of Saint Helena). 107-6 Cont.

Migrate to sustainable energy resources

I would hope that all utilities would be underground. To mitigate the use of natural gas and the movement to all electric homes in California all homes in the development should be outfitted with solar panels, as well as electric storage batteries. As a further contribution to affordability and energy sustainability, a solar electric generation system along with storage batteries should be installed as part of the development project – the solar panels could be located over the water collection basin between the east end of the development and the levee with related storage batteries installed on the Hunt's Grove Apartment's property. The proceeds from this additional power to the electric grid could be used to finance the development of the additional parking in the Hunt's Grove Apartment's property with any excess funds going to improvements of the water and sewage systems in the City of Saint Helena. 107-7 107-8

Conserve water

The residents of Saint Helena are frequently asked to conserve water. Adding 80+ new households does not help that effort. Furthermore, adding 80+ new households to the demand for limited amounts of water does not have a positive impact in the effort to create affordable housing for people – this higher cost of water contributes to the cost of living in Saint Helena. The development plan calls for using ground water from an existing well for irrigation but there is no solution for a neutral effect on the use of potable water. 107-9

Unfortunately, I do not have an environmentally sound solution for a neutral effect on the use of potable water, but I do have a suggestion to not use precious ground water for residential irrigation. That is to incorporate a series of cisterns under any newly constructed streets (and parking areas in Hunt's Grove Apartments) to store run off from streets, parking lots and buildings for nonpotable water uses such as irrigation to help conserve our limited sources of drinking water. 107-10

Agricultural land/vineyard preservation, traffic management improvements, sustainable energy resources, and thoughtful water management in the Hunter Subdivision Project warrant further consideration to help the City of Saint Helena evolve. 107-11

Respectfully submitted,

John Schoof

Response to Letter 107
John Schoof
October 30, 2021

107-1 The comment states that the Project should be deferred until more water supply is available that can support existing and future potable water demand of the City.

Please see Master Response 2.

107-2 The comment states an opinion that the existing vineyards should be preserved.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

107-3 The comment proposes alternative locations for infill housing development.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

107-4 The commenter claims that Starr Avenue is being used as a bypass route to downtown and that child safety is reduced because vehicles ignore stop signs at the intersection of Hunt Avenue and Starr Avenue.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

107-5 The comment claims that parking in the neighborhood is full and that the extension of Starr Avenue and Adams Street would make parking more difficult.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required.

107-6 The comment states an opinion that the Proposed Project be revised to eliminate the extension of Starr Avenue. The commenter also asserts that parking is an issue in the area.

The Project does not preclude the future expansion of Adams Street connecting to Silverado Trail. This is a separate City project and is not required for the Project. The comment is noted and forwarded to the decision makers for their consideration. Please refer to Response to Comment 107-5 for concerns regarding parking.

107-7 The commenter states an opinion that, in order to mitigate the use of natural gas and promote the movement to all-electric homes, the Project should be outfitted with solar panels and electric storage batteries.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

107-8 The comment states an opinion that additional power from solar panels could be used to finance the development of additional parking for the Hunt's Grove apartments as well as water and sewer improvements.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

107-9 The comment states an opinion that additional households from the Project would impact water conservation efforts and would contribute to the higher cost of living in the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

107-10 The comment states an opinion that groundwater should not be used for residential irrigation.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

107-11 The comment summarizes the concerns discussed in the comment letter.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

Comment Letter 108

November 3, 2021

St. Helena City Planning Department
St. Helena, Ca 94574

Dear Members,

I am writing this letter as a resident of St. Helena with my concerns and opposition to the Planning Commission and City Counsel's continued support and consideration of the development of the Hunter Project. The following are a list of my concerns. 108-1

The proposed site is a place where Native Americans lived and were buried. This is a place that should be left intact. Would you dig up the local cemeteries in Saint Helena to build 87 homes? These graves maybe unmarked to you and me, but the fact remains there are Native American people buried there who lived, laughed and played here. As a community we need to respect the people who lived here before we absorbed their land. 108-2

There are lots of issues concerning water. Where are we going to get enough water to take care of Saint Helena's needs right now? We have been on water rationing all summer and heavily fining those who use too much water. You have a pending law suit stating that the City has pulled out too much water from the some of its wells. We allowed precious water to course down the river and out to the ocean when we could have captured some of this water to refill our dams or reservoirs. Most people in St. Helena have installed all the water saving gadgets available just so they don't have to pay the fine imposed by the city if they were to accidently use too much water. Where are you going to get the water? 108-3

If there are going to be 81 structures built, we will be over taxing our public services. We will need to hire more police and fire or give up what we have and join forces with another city. If we can't afford to hire more people, then we will be getting slower response from the first responders since they will have to come from further away. Our city parks will see more usage and we will need more people to keep them clean. (I have been told that we don't have enough City Parks workers now to keep the parks mowed and clean.) What will the future hold for our beautiful city parks? 108-4 108-5

Our schools in the city will be affected as well by the influx of children. How are you planning on accepting another 174 plus (2 children per household) children from this new housing complex? Are we going to build new schools, install trailers as classrooms to teach the children? More children will be on our streets trying to get to school. How are you going to keep the children safe on the busy streets? 108-6 108-7

Honestly I don't think you can get any more cars on the street near Starr and Adams. Now you want to put even more cars there? If you open up Starr Ave, you are putting more traffic onto Pope St. The Pope St Bridge is already overused. I have seen the traffic build up on Pope St because drivers will not stay on the correct side of the yellow line when crossing the bridge. I have seen trucks use this bridge and block traffic. This will be an even bigger problem once we have 174 (2 cars per household) more cars going over this bridge to get to work, school, or wherever. Why is Adam Street not being extended to Silverado Trail? We have problems with speeders zooming down Pope Street and people not paying 108-8 108-9

attention to stop signs. (I was in the middle of the crosswalk at Pope & Starr when a car zooming down Starr came within inches of hitting me.) The flashing yellow lights at the intersection of Pope and Starr are ignored as well. We have the orange flags which are a good idea, but doesn't seem to work for the pedestrian. I have seen more cars on the residential streets on both the West and East side of town since the Trail has been closed. They seem to be in a hurry because they are going over the speed limit. I get that they are doing their best to get somewhere but we have traffic in town and they are trying to avoid it all costs. By doing this, they are endangering the people who live on the residential streets. When will someone take notice? When someone is injured or killed?

108-9 Cont.

Building this project next to a levee which has not been tested is probably not a great idea. If we have a major flood and the levee failed, where would the water go? It appears the new homes would be built higher than Vineyard Valley. If that is true, then Vineyard Valley would be inundated with the excess water and become flooded. Who will pay for the damage the flood would bring? Since this land is part of the original Flood Plain, do we need to re-evaluate the danger of flooding to the area? Would the City of St Helena be in violation of the terms of Measure A? I understand that neither the Army Corps of Engineers nor FEMA have inspected and certified that the levee meets required standards. I am also told that the levee has not been maintained since 2010. This concerns me. What happens if the levee should fail?

108-10

The open space and field provide home to so many local wild plants and animals. With all the fires we have had which destroyed wildlife habitat, more and more wildlife are coming to stay in St Helena. I love seeing the birds, foxes, coyotes and other wildlife hunt in this area. It is always such fun to go for a walk and enjoy the peace and quiet while watching the birds soar and various animals run after the rodents. Please let our wildlife habitat be left alone so they can thrive.

108-11

A practice evacuation drill was held for the Vineyard Valley residences where it was decided to utilize the area being proposed as a road for the new development. It appears this road may no longer be accessible if this project were to be built. It would, however, put a large strain on the Vineyard Valley residents as to their evacuation route. 200 plus people would be trying to get out of the park along with everyone from the new housing project all trying to use the same streets (Pope, Starr and Adams) to get out of danger. This is putting our community at risk. Who will pay the cost of law suits should anything go wrong?

108-12

Please do not approve the Hunter Project. It was turned down before, because it is such an ill-advised project. It is in the wrong place, it is the wrong time and it is too big for our little town.

108-13

Sincerely,
Cathy Small

Response to Letter 108
Cathy Small
November 3, 2021

108-1 The comment expresses opposition to the Project due to concerns noted in the letter (and addressed below).

The commenter's opinion is noted and forwarded to the decision-makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

108-2 The comment asserts, without indicating the source of information, that the Project site is the location of where Native American's "lived and were buried" and this needs to be respected.

Please see Response to Comment 55-4, which provides more detail specific to the presence of any tribal cultural resources or human remains.

108-3 The commenter states their concerns regarding availability of water to serve the City residents and asks where the City will get water to serve the Project.

Please see Master Response 2 that addresses concerns regarding water.

108-4 The comment raises a concern that the City's police and fire services will be impacted by the Project resulting in the need to hire more staff and slower response times.

The Draft EIR evaluates the ability of the City's police and fire departments to accommodate the increase in demand for service in Section 3.12, Public Services and Recreation. As noted on page 3.12-1, the closest police and fire station to the Project site is located 0.2 miles to the southwest. Development of the site was assumed in the City's 1993 General Plan as well as the recently adopted 2019 General Plan. The addition of new residences would not adversely affect the ability of the City's police and fire personnel to serve the site. The City's police and fire departments have adequate staff to accommodate the increase in demand for services and do not anticipate a decline in response times to the site.

108-5 The comment states an opinion the City's parks will experience more usage and will require more City staff to maintain the parks due to the increase in demand.

The Project would accommodate an increase in the City's population but as discussed on page 3.12-17 of the Draft EIR, the City requires the Project applicant to pay park and recreational impact fees to cover the cost of land acquisition and park improvements and property tax revenue would help fund additional City park staff, if

required. The Draft EIR concluded that payment of the required park and recreation impact fees would ensure the Project would not adversely impact City park facilities.

108-6 The comment addresses the ability of the school district to provide for additional students.

Based on the St. Helena Unified School District (SHUSD) student generation demand rates, the Project would add a total of 28 K-12 students to the SHUSD, as discussed in the Draft EIR starting on page 3.12-11. Based on 2019 enrollment numbers there is adequate capacity to accommodate the increase in students and existing schools are estimated to have more than sufficient capacity for projected enrollment through 2025. Under SB 50, payment of required school impact fees is complete and full mitigation for any potential impacts related to the need for school facilities.

108-7 The comment asserts that more children will be on local roadways and asks how the children will be kept safe.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

108-8 The commenter is concerned about traffic congestion along Starr Avenue and Adams Street. The comment asserts that traffic congestion is already high in the neighborhood and that the Pope Street Bridge is not wide enough to accommodate trucks.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision-makers for their consideration.

108-9 The comment asserts, without citing a source, that there are speeding issues along Pope Street and that drivers do not pay attention to stop signs and crosswalks. The comment also states an opinion that overall safety for pedestrian and motorists would be worsened with the proposed project.

Transportation impacts are analyzed in Section 3.14 of the Draft EIR. This Section analyzed Project transportation impacts related to consistency with plans or policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, hazardous design, and emergency access. The Draft EIR concludes that the Project would have less-than-significant impacts to these matters.

108-10 The comment raises numerous concerns on the part of the commenter regarding the levee including status of certification by FEMA and the Army Corps of Engineers, levee maintenance, storm water flows from the site into the adjacent Vineyard Valley development, and status of the floodplain.

The levee provides a 200-year level of flood protection, rather than the "100-year flood plain" referenced in the comments. The manner in which inspection and maintenance responsibilities for the existing levee are assigned are not environmental effects related to the Proposed Project. Furthermore, under CEQA, the effects of the environment upon the project are not "impacts." Rather, CEQA requires the lead agency to consider the ways in which the project effects the environment. The potential hydrological effects of the Project, including the potential to impede or redirect flood flows, are considered in Section 3.9 of the Draft EIR. See also Master Response 3 for further details regarding the levee, required certification, and maintenance responsibilities.

108-11 The comment expresses a general belief that open space provides habitat to plants and animals and requests that wildlife habitat be left alone.

The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, the comment is noted and forwarded to the decision-makers for their consideration.

108-12 The comment is referencing the emergency evacuation route used by Vineyard Valley residents along the existing levee maintenance road and questions if this road would be accessible if the Project is approved.

Please see Master Response 1 that provides more details specific to the maintenance road for emergency evacuation for both Vineyard Valley residents and Project residents.

108-13 The comment requests the Project not be approved because it is "too big for our little town."

The commenter's opinion is noted and forwarded to the decision-makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 109

-----Original Message-----
From: Patricia Stephens <trishstephens2110@gmail.com>
Sent: Tuesday, November 2, 2021 9:57 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] HUNTER SUBDIVISION PROJECT

I am writing in protest of the Hunter Subdivision project. I am a resident homeowner in Saint Helena and am amazed anything of this magnitude would ever get passed. Given the current water situation and the already apparent immense traffic how could anyone even think this is a good idea. The negative impact to our city and it's limited services would be strained to breaking point. No consideration has been given to the strain on the police and fire departments let alone the tax paying citizens who will have to endure the construction, the mess and noise, and the traffic problems such a development would cause. 109-1

I believe this to be a very unpopular project. If the elected officials will not listen and heed the wishes of the people who elected them then they do not get re-elected or they are recalled. 109-2

Patricia Stephens

Sent from my iPad

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Response to Letter 109
Patricia Stephens
November 2, 2021

109-1 The comment provides the commenter's personal history as a resident of the City. The commenter is concerned about the City's current traffic and water supply and states an opinion that the Project would negatively impact the City's police and fire departments.

The Draft EIR evaluates the ability of the City's police and fire departments to accommodate the increase in demand for service in Section 3.12, Public Services and Recreation. The Draft EIR concludes that City's police and fire departments have adequate staff to accommodate the increase in demand for services and do not anticipate a decline in response times to the site.

Please see Master Response 2 that addresses water supply.

The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. The analysis includes consideration of motorized vehicle traffic impacts on roadway capacity, vehicle-miles travelled (VMT), and potential impacts to transit, bicycle, and pedestrians.

109-2 The comment expresses general opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 110

From: Carolyn Troyan <carolyn@troyan.org>
Sent: Saturday, November 6, 2021 3:59 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Development Project

I am writing to let you know as a St Helena resident I am not in favor of the Parker project. The open land is a popular walking area for residents and their pets. The further strain on resources right now feels like we should wait until we recover from the drought. 110-1

Thanks for listening!

Carolyn Troyan

1134 Valley View St

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Response to Letter 110
Carolyn Troyan
November 6, 2021

110-1 The comment states opposition to the Project regarding concerns related to the Project's potential impact to the adjacent walking trail and City's water supply.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 111

From: Vineyard Valley MHP <vineyardvalleymhp@gmail.com>
Sent: Monday, November 29, 2021 11:09 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Vineyard Valley Response Hunter Project Draft EIR

Maya,
Please confirm receipt of this submission. Thank you.

Vineyard Valley Shared Response
These comments are submitted by the Vineyard Valley Managing Partner and supported by the following residents of the Vineyard Valley community.

Andree Bryan	Denise Leonetti
Kristi Lyn Matthews	Doris Bryant
Margret O'Fallon	Judith Greene
Maureen Barton	Paul Piazza
Betsy Holzhauer	Barbara Ringenberg
Linda Titus	John West
Elizabeth Green	Mary West
Rodney Green	Nora O'Neill
Diane J Barr	Mariam Hansen
Kenneth G Young	Carol Havens
John Polley	Barrie Rose
Chris Echols	Gary Rose
Michael Powell	Neil Walden
Mara M Rankin	Barbara Barnhart
David Chan	Rob Tedeschi
Rebecca Soret	Dagmar Gewiese-David
Vivian Pirchner	Janeen Dirienzo
Gunter Pirchner	Geri Densberger
Trevor Barlow	Cathy Small
Beth Rodda	Leanne Corkill
Steve McNabb	Tom Corkill
Donna McNabb	Sherie Downie
Dottie Gingerelli	Chris Duffey
Lauretta Cecchino	Grace Kistner
Chuck Pniower	Doris Mosler
Gary Crosman	Tom Vence
Madeline DeMarco	Jenna Lavagnino
Marina Lavagnino	

It is beyond dispute that our community will be directly and significantly impacted by the Hunter Project. With this in mind we submit these comments which are limited to the inadequacies perceived by us in the areas of **transportation** (traffic impacts), **utilities**, especially serious wastewater problems based on past experience, and **emergency evacuation** (with fairly quick evacuation from Vineyard Valley in the current environment can be no small challenge.

111-1

Our comments relate solely to our reading of the adequacy of the Draft EIR regarding: Transportation and Circulation, Utilities and Service Systems and Omission of Emergency Evacuation

1. Transportation and Circulation

Draft EIR page 3.14-41 presents Table 3.14-3 which provides a Proposed Project VMT, Vehicle Miles Traveled Summary.
It is clear from the table the Proposed Project Transportation Demand Management (TDM) strategies would result in a Project VMT to be 15.2 % higher than the City wide VMT per capita.
The conclusion under the heading ***Mitigation Measures*** states because there are no feasible mitigation measures available to substantially reduce or lessen the impact of the Proposed Project to less than significant…… **the impact is a significant and unavoidable impact**.
Draft EIR concludes and clearly states that the Proposed Project has a significant and unavoidable impact. It is our opinion that City Planning and Council has an obligation to the citizens of St Helena to protect their environmental integrity and respect the well substantiated conclusion of the Draft EIR; There is no legitimate basis for overriding such a clear unavoidable impact as stated in the Draft EIR.

111-2

2. Utilities and Service Systems

Draft EIR page 2-29 section entitled Sewer System states that wastewater flows will discharge from two locations on the proposed project site. The western end of the site is proposed to drain into an existing manhole at the corner of Starr and Hunt avenue.
The area **east of Starr avenue**, is proposed to drain east through the project site via new 8-inch sewer pipes through lot 21 within a public easement manhole on the adjacent parcel in the **Vineyard Valley Home Park.** The number of homes served on the eastern end of the project would number 46 and results based on estimates, in the Draft EIR by RSA+, a civil engineering firm calculates approximately **13,000 gallons** of new discharge to the existing manhole per day taking into account the proportion of 46 homes to the Projects 51 homes.

111-3

The manhole on Vineyard Valley property connects to a sewer pipe that runs under Paseo Grande Drive which is the central thoroughfare in the Park. This pipe delivers the wastewater to a pipeline system ending up at the city wastewater facility.
The pipe is part of a wastewater siphon system that is owned and maintained by the City. The siphon was installed most likely because the discharge pipe has to cross Sulphur Creek. These systems **are well known to present problems in communities around the countr**y (EPA newsletter March 2015: "Inverted siphons carry wastewater flows under rivers, canals, road, etc. These structures can present problems, and communities look for ways to avoid siphons in their collection system when

111-4

possible."} and here in Vineyard Valley we have had our share of problems over the years from backups of water and waste products from a city manhole located on Paseo Grande Drive during heavy rains. The result is a public health issue for our residents when spills occur. The city is fully aware of these issues since we call them to mitigate when they occur. 111-4 Cont.

Additional wastewater flows projected from the Project are health and safety issues for the residents of Vineyard Valley. 111-5

The Draft EIR has not addressed this issue of sewage spilling in the streets of Vineyard Valley.

Further, after reviewing the estimates in the Water Neutral Report Volume III Appendix J prepared by RSA+ we believe the wastewater estimates could be as low as 50 to 100 %, thus: even making things worse. Also, we do not see estimates of wastewater from the **11 ancillary units** 111-6

The reason we disagree with the estimates in the EIR is the assumption of 35 gallons per occupant per day of residential wastewater discharge does not even come close to historical St Helena water usage as described in a 2016 Water and Wastewater study which ranges from 65 to 80 gallons per day (excluding landscaping) depending on assumptions of occupants per residential account. 111-7

In addition, currently Phase 2 of the City's water shortage emergency program calls for residents to limit non-landscaping use to 65 gallons per day. How can 35 gallons per day be a reasonable assumption based on past practices. Why should the City, in this time of water shortage, consider this assumption of water use as reasonable? 111-8

We believe that the Draft EIR is wrong on the estimates of water use as calculated by RSA+

In summary, the Draft EIR does not address the public health and safety issue of increased flows and an inadequate sewage delivery system resulting in sewage spilling into the streets of Vineyard Valley. 111-9

We believe the Draft EIR is wrong on the estimates of water use as calculated by RSA+ 111-10

Sewage spills in Vineyard Valley have been documented in the past with vastly lower wastewater flows than the unrealistic estimates in the Draft EIR. 111-11

3. Emergency Evacuation

During a Wildfire Fire emergency or any other major event in order to quickly and safely evacuate residents we need the two designated exits to be available and viable. These exits are Paseo Grande Drive to Pope street and Paseo Grande Drive connected to Adams street (or extended) 111-12

We believe the Hunter Project Development will seriously impact the adequacy of the Adams street evacuation plans, with the CEQA requirements not adequately addressed in the Draft EIR.

1. CEQA IX Hazardous and Hazardous Materials. Would the Project:

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? 111-13

The issue of emergency evacuation in the event of a significant Hazardous waste spill event in Vineyard Valley is not covered in the Draft EIR
2. CEQA XVII Transportation Would the project: **d) Result in inadequate emergency access**?
We have not seen this topic covered in the draft EIR and we are very concerned that emergency access will be greatly diminished by the Hunter Project development.

3. CEQA XX Wildfire. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:
a) Substantially impair an adopted emergency response plan or emergency evacuation plan.
We believe the Hunter Project Development would impair our evacuation Plan and this has not been addressed adequately in the Draft EIR
The Draft EIR has failed to adequately address CEQA requirements related to section IX Hazards and Hazardous Materials f) section XVII Transportation d), and section XX Wildfire a)

We believe the implementation of the Hunter project puts the park residents in harm's way in an emergency evacuation event.

111-13 Cont.
111-14
111-15
111-16
111-17

Response to Letter 111
Valley Vineyard Mobile Home Park
November 29, 2021

111-1 The comment states an opinion that the Vineyard Valley Mobile Home Park community would be directly and significantly impacted by the Project. The comment introduces the concerns discussed in the comment letter.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

111-2 The comment states an opinion that because the Project's VMT is estimated to be 15.2% higher than the Citywide VMT per capita it would be a significant and unavoidable impact which cannot be mitigated, and the EIR should not be approved.

Please refer to Response to Comment 93-8 for clarification on VMT baseline and significance threshold used for the Project's VMT comparison. The commenter's opinion the EIR should not be certified is noted and forwarded to the decision makers for their consideration.

111-3 The comment restates information included in the Draft EIR regarding the sewer system and wastewater flows.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. See also Master Response 4.

111-4 The comment states that the sewer pipe connecting to the Vineyard Valley manhole is part of a wastewater siphon system and asserts, citing an EPA newsletter article, that siphon systems are known to result in water and waste backups.

Please see Master Response 4.

111-5 The comment states an opinion that additional wastewater flows from the Project would result in health and safety issues for Vineyard Valley residents. The comment states an opinion that the Draft EIR does not address the issue of sewage backup at Vineyard Valley.

Please see Master Response 4.

111-6 The comment states an opinion that wastewater estimates in the Water Neutral Report (Appendix J) may be 50% to 100% lower than reality.

Please see Master Response 4.

111-7 The comment states an opinion that the assumption of 35 gallons per occupant per day of residential wastewater discharge does not match historical City water usage described in the 2016 Water and Wastewater Study, which ranges from 65 to 80 gallons per occupant per day.

Please see Master Response 2.

111-8 The comment asserts that 35 gallons per occupant per day is not a reasonable assumption.

Please see Master Response 2.

111-9 The comment states an opinion that the Draft EIR does not address the public health and safety issue of increased wastewater flows resulting in sewage backup at Vineyard Valley.

Please see Master Response 4.

111-10 The comment states an opinion that the Draft EIR is wrong about its water use estimates.

Please see Master Response 2.

111-11 The comment asserts that sewage spills at Vineyard Valley have been documented to occur with lower wastewater flows than the estimates presented in the Draft EIR.

Please see Master Response 4.

111-12 The comment states an opinion that the Proposed Project would have a negative effect on emergency evacuation in the City, especially along Adams Street.

For concerns regarding emergency evacuation, please see Master Response 1.

111-13 The comment asserts that the issue of emergency evacuation in the event of a hazardous waste spill event is not covered in the Draft EIR.

Please see Master Response 1 regarding emergency evacuation.

111-14 The comment claims that emergency access was not analyzed in the Draft EIR and expresses an opinion that emergency access would be greatly diminished due to the Proposed Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. Emergency evacuation was analyzed Section 3.14 of the Draft EIR and Project impacts were concluded to be less than significant. Please also see Master

Response 1, that provides more details specific for emergency evacuation for both City residents and the Proposed Project.

111-15 The comment states an opinion that the Project would impair the Vineyard Valley evacuation plan and that this issue has not been adequately addressed in the Draft EIR.

Please see Master Response 1.

111-16 The comment states an opinion that the Draft EIR fails to adequately address CEQA requirements related to hazards and hazardous materials, transportation, and wildfire.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. The Draft EIR evaluates the potential for the Project to expose future residents to potential hazards in Section 3.8, Hazards and Hazardous Conditions. The analysis concludes impacts would be less than significant with the exception for the potential for residual pesticides to be present in the soils. Compliance with required mitigation would ensure the impact would be reduced to less than significant. Please see Responses to Comments 10-2, 36-1 and 36-2 regarding transportation and 39-5 and 82-14 regrading wildfire.

111-17 The comment states an opinion that the Project would harm Vineyard Valley residents in an emergency evacuation event.

Please see Master Response 1. The commenter’s opinion is noted and forwarded the decision makers.

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Comment Letter 112

Public Comment on Draft EIR for the Hunter Subdivision Project
11/17/2021

These comments are submitted by the ownership and supported by the community of Vineyard Valley. It is beyond dispute that our community will be directly and significantly impacted by the Hunter Project. With this in mind we submit these comments which are limited to the inadequacies perceived by us in the areas of **transportation** (traffic impacts), **utilities,** especially serious wastewater problems based on past experience, and **emergency evacuation** (with fairly quick evacuation from Vineyard Valley in the current environment can be no small challenge.

112-1

Our comments relate solely to our reading of the adequacy of the Draft EIR regarding: Transportation and Circulation, Utilities and Service Systems and Omission of Emergency Evacuation

1. Transportation and Circulation

Draft EIR page 3.14-41 presents Table 3.14-3 which provides a Proposed Project VMT Summary. It is clear from the table the Proposed Project Transportation Demand Management (TDM) strategies would result in a Project VMT to be 15.2 % higher than the City wide VMT per capita.

The conclusion under the heading ***Mitigation Measures*** states because there are no feasible mitigation measures available to substantially reduce or lessen the impact of the Proposed Project to less than significant…… **the impact is a significant and unavoidable impact.**

112-2

Draft EIR concludes and clearly states that the Proposed Project has a significant and unavoidable impact.
It is our opinion that City Planning and Council has an obligation to the citizens of St Helena to protect their environmental integrity and respect the well substantiated conclusion of the Draft EIR; There is no legitimate basis for overriding such a clear unavoidable impact as stated in the Draft EIR.

2. Utilities and Service Systems

Draft EIR page 2-29 section entitled Sewer System states that wastewater flows will discharge from two locations on the proposed project site. The western end of the site is proposed to drain into an existing manhole at the corner of Starr and Hunt avenue.
The area **east of Starr avenue,** is proposed to drain east through the project site via new 8-inch sewer pipes through lot 21 within a public easement manhole on the adjacent parcel in the **Vineyard Valley Home Park.** The number of homes served on the eastern end of the project would number 46 and result based on estimates in the Draft EIR by RSA+, a civil engineering firm calculates approximately **13,000 gallons** of new discharge to the existing manhole per day taking into account the proportion of 46 homes to the Project 51 homes.

112-3

The manhole on Vineyard Valley property connects to a sewer pipe that runs under Paseo Drive which is the central through fair in the Park. This pipe delivers the wastewater to a pipeline system ending up at the city wastewater facility.
The pipe is part of a wastewater siphon system that is owned and maintained by the City. The siphon was installed most likely because the discharge pipe has to cross Sulphur Creek. These systems **are well known to present problems in communities around the country** (EPA newsletter March 2015: "Inverted siphons carry wastewater flows under rivers, canals, road, etc. These structures can present problems, and communities look for ways to avoid siphons in their collection system when possible.") and here in Vineyard Valley we have had our share of problems over the years from backups of water and waste products from a city manhole located on Paseo during heavy rains. The result is a public health issue for our residents when spills occur. The city is fully aware of these issues since we call them to mitigate when they occur. 112-4

Additional wastewater flows projected from the Project are health and safety issues for the residents of Vineyard Valley. 112-5

The Draft EIR has not addressed this issue of sewage spilling in the streets of Vineyard Valley.

Further, after reviewing the estimates in the Water Neutral Report Volume III Appendix J prepared by RSA+ we believe the wastewater estimates could be as low by 50 to 100 %, thus: even making things worse. Also, we do not see estimates of wastewater from the **11 ancillary units** 112-6

The reason we disagree with the estimates in the EIR is the assumption of 35 gallons per occupant per day of residential wastewater discharge does not even come close to historical St Helena water usage as described in a 2016 Water and Wastewater study which ranges from 65 to 80 gallons per day (excluding landscaping) depending on assumptions of occupants per residential account. 112-7

In addition, currently Phase 2 of the City's water shortage emergency program calls for residents to limit non landscaping use to 65 gallons per day. How can 35 gallons per day be a reasonable assumption based on past practices. Why should the City in this time of water shortage consider this assumption of water use as reasonable? 112-8
We believe that the Draft EIR is wrong on the estimates of water use as calculated by RSA+

In summary, the Draft EIR does not address the public health and safety issue of increased flows and an inadequate sewage delivery system resulting in sewerage spilling into the streets of Vineyard Valley. 112-9
We believe the Draft EIR is wrong on the estimates of water use as calculated by RSA+ 112-10

Sewage spills in Vineyard Valley have been documented in the past with vastly lower wastewater flows than the unrealistic estimates in the Draft EIR. 112-11

3. Emergency Evacuation

During a Wildfire Fire emergency or any other major event in order to quickly and safely evacuate residents we need the two designated exits to be available and viable. These exits are Paseo Drive to Pope street and Paseo Drive connected to Adams street (or extended)
We believe the Hunter Project Development will seriously impact the adequacy of the Adams street evacuation plans, with the CEQA requirements not adequately addressed in the Draft EIR. 112-12

1. CEQA IX Hazardous and Hazardous Materials. Would the Project:
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
The issue of emergency evacuation in the event of a significant Hazardous waste spill event in Vineyard Valley is not covered in the Draft EIR 112-13

2. CEQA XVII Transportation Would the project: **d) Result in inadequate emergency access**?

We have not seen this topic covered in the draft EIR and we are very concerned that emergency access will be greatly diminished by the Hunter Project development. 112-14

3. CEQA XX Wildfire. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:
a) Substantially impair an adopted emergency response plan or emergency evacuation plan.

We believe the Hunter Project Development would impair our evacuation Plan and this has not been addressed adequately in the Draft EIR 112-15

The Draft EIR has failed to adequately address CEQA requirements related to section IX Hazards and Hazardous Materials f) section XVII Transportation d), and section XX Wildfire a) 112-16

We believe the implementation of the Hunter project puts the park residents in harms way in an emergency evacuation event. 112-17

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Response to Letter 112
Vineyard Valley Residents
November 17, 2021

The City received a second letter from the Vineyard Valley residents that is a duplicate of Letter 111. Please see Responses to Letter 111.

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Comment Letter 113

From: Maria Villegas <marrivilla1@comcast.net>
Sent: Friday, October 29, 2021 1:29 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] DEIR questions and comments

Dear Ms. DeRosa,
The following are questions and comments on the DEIR.

Question 1

ES.5. Effects found to be less than significant
Wildfire

"Starting in August 2020, there were a number of wildfires including the LNU lightning Complex Fire and the Glass Fire that burned large areas of Napa County including a small portion of the Project site. Based on the current CAL FIRE maps the Project site is not located within a State Responsibility Area and is not designated as a VHFHSZ" 113-1

Question
1. If the Glass Fire burned a small portion of the Project, please clarify why the Project site has not been re-evaluated as a fire zone?

2. When determining State Responsibility Areas, has Climate Change been taken into consideration given recent extreme fire behavior and patterns? 113-2

3. The last fire which crossed Silverado Trail and came extremely close to residents at Vineyard Valley, had limited evacuation routes or evacuation warnings. Evacuation routes would not only impact existing surrounding neighborhoods, but the newly proposed Project. Please clarify how evacuation routes will be mitigated. 113-3

With the current closure of Silverado Trail, the current traffic conditions gives insight how dangerous and life threatening any disaster would be to the community. While the DEIR readily admits traffic is a problem, I see no reasonable data which would mitigate the problem. 113-4

Question 2

Landscaping and Lighting

"Approximately 74 scarlet maple trees would be planted along the Adams Street extension...57 Chinese pistachio trees would be planted along Street A. Approximately 54 tulip trees would be planted along Street B ..."

Question

1. Currently the City is in a Phase II water conservation. The city has mandated discontinuation of landscaping irrigation how will the water shortage be mitigated in a severe drought? 113-5
2. Why is the City of St Helena the only city in Napa County being penalized for over usage of water? Will the current penalty fees be used on the Hunter Project in any way? 113-6
3. Is the proposed well currently functioning and operational? 113-7
4. When was the well last inspected or tested?
5. If the applicant is proposing the well be owned and maintained by a homeowners association or similar method, how will that impact the city's water usage in the event the well is non-functioning? 113-8
6. How was it determined the applicant determine who owns the well and through what means it will be maintained?

It is known most citizens of St. Helena have not been pleased with excessive penalty fees. Why would any new development be considered now? 113-9

Question 3

3.5 Cultural and Tribal Cultural Resources

Records Search

"This work has demonstrated the area to contain significant and highly sensitive archaeological resources. A total of 163 human remains/burials were recovered from one site (CA-NAP-399) as part of the Flood Protection project, the largest number of burials recovered from a single site in the Napa Valley to date (Schneider et al. 2013:44).

"Subsurface probing (XPI probing or investigation) was conducted by a Dudek archeologist from November 15, 2018 to November 17, 2018...Excavation included three 6-inch hollow-stem augers and 5 shovel test probes. Excavations did result in the identification of areal within the Project site that contain, and have the potential to contain archaeological resources."

AB 52

AB 52 requires consultation with Native American tribes traditionally and culturally affiliated with the geographic area in which a project requiring CEQA review is proposed if those tribes have requested to be informed of such proposed projects....This law is in addition to existing legislature protecting archaeological resources associated with California Native American tribes. AB 52 applies to all projects initiating environmental review in or after July 2015.

Question

1. If the area contains "significant and highly sensitive archaeological resources with a total of 163 human remains/burials, the largest number of burials recovered from a single site in the Napa Valley to date (Schneider et al. 2013:44)..., why is the site no longer eligible for the California Register of Historic Resources and the National Register of Historic Places? 113-10

2. The DEIR states a number of prehistoric sites have been identified within the study area and "two sites were identified with the boundaries of the proposed Project". Please clarify. 113-11

3. Have the following artifacts been returned to the Wappo Tribe?
   Found on two sites of the project were:
   - Historic Wappo - Trade Beads
   - Projectile points
   - Charmstones, Bone Tools, Groundstone

4. If the artifacts were not returned to the Wappo Tribe, who has current possession of the artifacts? 113-12

5. AB 52 requires consultation with Native American Tribes traditionally and culturally affiliated with the geographic area. The DEIR indicates Scott Gabaldon, Tribal Chairman, Mishwah-Wappo Tribe was not notified. Please clarify why the Tribal chairman was not contacted? 113-13

6. Where are the 163 human remains? 113-14

7. California Health and Safety Code Section 7070.5(b) of the California Health and Safety Code specifies protocols to address any human remains that may be discovered. Was this protocol followed? Please clarify. 113-15

The DEIR has addressed the issue of human remains and historical artifacts in a most deplorable manner. I trust the applicant would demonstrate some sign of decency and respect for human sanctity. 113-16

Thank you,
Maria Villegas

Response to Letter 113
Maria Villegas
October 29, 2021

113-1 The comment asks for clarification on why the Project site has not been re-evaluated as a very high fire hazard zone if part of the site was burned in the Glass Fire.

On page E-3 of the Draft EIR Executive Summary, it explains the Project site is not located within a state responsibility area and not designated as being within a very high fire hazard severity zone. Neither the City or applicant are involved in the designation of fire hazard zones. Please see Response to Comment 76-9 regarding the Glass Fire.

113-2 The commenter asks whether climate change is considered when determining state responsibility areas.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 113-1.

113-3 The comment states an opinion that the neighborhood does not have adequate evacuation routes and that the Proposed Project would need to mitigate for additional evacuation routes in case of wildfire.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate. However, emergency evacuation was analyzed Section 3.14 of the Draft EIR and Project impacts were concluded to be less than significant. Please also see Master Response 1, that provides more details related to emergency evacuation for both Vineyard Valley residents and the Proposed Project.

113-4 The comment states that the Silverado Trail is currently (October 2022) closed, and asserts that traffic congestion in the City has worsened. The comment asks for additional traffic mitigations.

Please see Response 50-4.

113-5 The comment asks how water shortages would be mitigated in a severe drought.

Please refer to Master Response 2.

113-6 The comment asks why St. Helena is the only city in Napa County penalized for overuse of water and whether the Project would also be subject to current penalty fees.

Please refer to Master Response 2.

113-7 The comment asks if the well to be used for the Project is currently functioning and when it was last inspected or tested.

Please refer to Master Response 2 and Response to Comment 57-5.

113-8 The comment asks how the City's water usage would be impacted in the event the well is non-functioning. The comment also asks how it was determined who owns the well and how it would be maintained.

Please refer to Master Response 2 and Response to Comment 57-5.

113-9 The comment asks why new development should be considered when residents of the City are already not pleased with excessive water penalty fees.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

113-10 The comment notes that the area contains sensitive archeological resources along with human remains and asks why the site is no longer eligible for the California Register of Historic Resources and the National Register of Historic Places.

The Draft EIR addresses the history of the area, including the Project site for the potential for cultural resources (including human remains) to be present on the Project site. To evaluate the potential for the Project site to contain sensitive archeological resources and human remains a Cultural Resources Inventory and Extended Phase I and Phase II Report (confidential Appendix E) was prepared for the Proposed Project. Research conducted included a California Historical Resources Information System (CHRIS) records search, which was conducted at the Northwest Information Center (NWIC) for the Project site and surrounding 0.5-mile radius. This search included their collection of mapped prehistoric, historical and built-environment resources, Department of Parks and Recreation (DPR) Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources included the National Register of Historic Places (NRHP), California Inventory of Historical Resources/California Register of Historical Resources (CRHR) and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and Caltrans Bridge Survey information. The records search concluded that 59 previous cultural resources technical investigations have been conducted within a one half-mile of the Project site. Of these, seven have included a portion of the Project site resulting in approximately 90% of the Project site included in previous investigations.

Archaeological investigations conducted the Flood Protection Project overlapped the western and northern portions of the present Project site. As a result of the survey work conducted for the Flood Protection Project eight archaeological resources were identified (all in the general vicinity of the present Project site). Of the eight resources five lacked sufficient data potential and integrity to meet the criteria for NRHP eligibility. It was determined that three sites were eligible for listing in the NRHP. Only one archaeological resource (CA-NAP-406) which intersects the Project site has been determined to be eligible for CRHR and NRHP listing. The Phase I and Phase II archaeological excavations conducted on the Project site in addition to a ground penetrating radar investigation concluded there are no intact deposits or features associated with CA-NAP-406 that appear to extend into or within the Project site.

The Cultural Inventory and Extended Phase I and Phase II Report conducted for the Proposed Project noted three archeological sites were previously identified within the Project site (CA-NAP-406, CA-NAP-843, and CA-NAP-1008), two of which (CA-NAP-843 and CA-NAP-1008) were determined not to be NRHP/CRHR eligible. The Cultural Inventory Report determined that impacts to CA-NAP-843 and CA-NAP-1008 would not represent a significant effect.

The Flood Protection Project resulted in a substantial level of previous archaeological investigation work along the western and northern portions of the Project site. A total of 163 human burials were recovered from one site as part of the Flood Protection Project, the largest number of burials recovered from a single site in Napa Valley to date. However, based on the Phase I and Phase II investigations conducted on the Project site along with ground penetrating radar no human remains were documented within the archaeological resources that intersect the Project site.

The Draft EIR concluded that there are no resources that would qualify the entire Project site to be eligible for listing on either the National Register of Historic Places (NRHP) or the California Inventory of Historical Resources/California Register of Historical Resources (CRHR). Detailed information and analysis supporting this conclusion is provided in Section 3.5 of the Draft EIR.

113-11 The comment references resources identified within the Project site and requests this be clarified.

Please see Response to Comment 113-10 that addresses this comment.

113-12 The comment asks if specific artifacts, trade beads, projectile points, and charmstones, bone tools and groundstone have been returned to the Wappo Tribe, and who has current possession of the artifacts.

There is no mention of beads being discovered at the Project site; 3 projectile point fragments were identified as part of cultural evaluation conducted in 1993 for a different project in proximity to the Project site (DEIR p. 3.5-7). There is no reference to charmstone, bone tools or groundstone being found on the Project site. It is not

known if the other artifacts identified at the other project were returned to the Wappo Tribe or where these artifacts currently are located.

113-13 The comment references AB 52 and is asking why the Mishwah-Wappo Tribal chairman was not contacted.

A letter was sent to Vincent Salsedo with the Mishewal-Wappo Tribe of Alexander Valley on April 23, 2018. The Mishewal-Wappo Tribe did not respond to the City's letter requesting consultation on this Project.

113-14 The commenter requests information on where the 163 human remains are located.

As noted in Response to Comment 113-10, the human remains were discovered as part of the City's Flood Protection Project. The location of any recorded cultural resource is confidential so the location of where the human remains were discovered is not available for public review.

113-15 The comment states that California Health and Safety Code Section 7050.5 includes specific procedures to follow to address any human remains that may be discovered and is asking to clarify if this procedure was followed.

It is not clear if the comment is asking about the Proposed Project or the City's Flood Protection Project. Since the Project is under review at this time it is assumed the comment is referencing the Proposed Project. Compliance with this state law is required during any ground disturbing activities and has been identified as Mitigation Measure CUL-2.

113-16 The comment expresses an opinion that the Draft EIR addressed human remains and historical artifacts in a "deplorable manner" and requests the applicant demonstrate decency and respect.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required.

Comment Letter 114

November 29, 2021

Maria Villegas
1166 Meadowcreek Circle
St. Helena, Ca 94574

Maya De Rosa, AICP
Planning and Building Director
City of St. Helena, Planning& Community Improvement Department
1572 Railroad Ave., St. Helena, Ca 94574

Dear Maya,
The following are my comments regarding the draft EIR for the Hunter Subdivision Project, Assessor's Parcel Number 009-030-057.

Project Background 10839, ES-1

The majority of the Project site was acquired by Dennis Hunter in 1997. **Planning efforts were first initiated for development of the Project site in 2005 and an application was submitted to the City in September 2010** that included a request for a Tentative Map to subdivide the property for residential development. **A completeness letter for the proposed subdivision was issued by the City on March 28, 2011. Since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project. Nonetheless, this EIR also evaluates consistency with the City's current "General Plan Update 2040" for information and consistency purposes.**

Question
Planning efforts were initiated for development of the project site in 2005 and the application was submitted to the City in September 2010, why was the application submission date accepted as qualifying for the 1993 General Plan? 114-1

1. What is the approval date for the application? 114-2

Page 1 of 5

2. How long is an application valid before a developer needs to submit a new application?
3. Has an extension been applied to the application to prevent a lapse in the permits?
4. If so, on what basis was the extension applied?
5. What is the time frame for filing an extension?
6. What work has allowed an extension to be applied since the date of the permit's completion?
7. If an extension is inapplicable, shouldn't the current general plan be used to analyze the project's impacts?

114-2 Cont.

114-3

114-4

"A completeness letter for the proposed subdivision was issued by the City on March 28, 2011." Why isn't the date the City issued the completeness letter implemented, given the City's request for a Tentative Map, when the application was submitted?

114-5

1993 General Plan
1.2 Purpose and scope of the General Plan 1-3
The St. Helena General Plan is a legal document required by State law. It serves as the City's "constitution," identifying the City's long range plans for development of land and the conservation of resources.
...**The 1993 St. Helena General Plan establishes City policy for the period between 1993-2010.**

While each community's General Plan should be tailored to the specific concerns or interests of its residents, State law requires that at a minimum seven topics or "elements"be addressed.These elements include: land use, housing, circulation, conservation, open space, public safety and noise. **The Plan can also include other elements as needed to address issues of local importance. Other issues that are often addressed in separate elements include: recreation, public services and facilities, community design, historic preservation, and growth management. The 1993 St. Helena General Plan addresses all of these issues, but combines some of them into single elements...**

Question:
1993 General Plan - 1.2 Purpose and scope of the General Plan 1-3

Page 2 of 5

The St. Helena General Plan is a legal document required by State law. It serves as the City's "constitution,"….The 1993 St. Helena General Plan established City policy for the period between 1993-2010.

1. Please clarify why approval of the proposed subdivision does not fall under the jurisdiction of the 2019 General Plan. 114-6

2. There are changes with the City's water supply, electrical grid and climate change. Is the City accepting outdated data? Please clarify the justification for accepting data that was applied in 1993 to our current infrastructure of 2021. 114-7

DEIR 2040 10839 4-8

4 - CEQA Considerations

The City updated the General Plan in 2019. However, since the Proposed Project application was submitted in September 2010 and deemed complete by the City in 2011.

Exhibit A
CEQA FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS FOR THE ST. HELENA 2040 GENERAL PLAN UPDATE - 1

II. THE PLAN

4. The Plan is the St. Helena 2040 General Plan Update (Plan or or Project) analyzed under CEQA, which addresses growth and preservation within the City of St. Helena to the horizon year of 2040. **The Plan replaces the existing 1993 General Plan. The Plan referred to in these findings is the Plan as approved by the St. Helena City Council on May 14, 2019**
6. The Plan provides the basis for the City's land use and development policy and represents the basic community values, ideals and aspirations that will govern development and conservation through the planning horizon year of 2040. Specific objectives established for the Plan include the following:

    (b) Focus future development so that it is contiguous to

Page 3 of 5

existing developed areas and supports efficient delivery of public services and infrastructure;

(e) Reduce traffic congestion by providing alternative transportation choices, enhancing regional public transit connections, and achieving an appropriate jobs-to-housing balance to reduce commuter trips;

(j) Provide a high-quality network of parks, open spaces, and trails that enhances quality of life and connectivity in the community; and

Question:

1. According to Exhibit A, CEQA Findings of Fact and Statement of Overriding Considerations for the St. Helena 2040 General Plan Update, II. The Plan-4. States the Plan replaces the existing 1993 General Plan. The Plan was approved by City Council on May 14, 2019 is inconsistent with the current draft EIR. Please clarify how the draft EIR is valid. 114-8

Question:

Exhibit A specifies objectives to include:
"6 (b) Focus future development so that it is contiguous to existing developed areas and support efficient delivery of public services and infrastructure."

2. Currently the City is in a severe drought prompting the City to impose significant fines to residents for water overuse. St. Helena is the only city in Napa County imposing such fines. Please clarify how imposing a fifteen second hand wash, which is not what CDC advises as precautionary measures for COVID-19, and three flushes per day, would not impact the City's existing developed areas. 114-9

6 (e) Reduce traffic congestion by providing alternative transportation choices…

3. The proposed Projects eighty-seven (87) units would increase traffic on Starr, Adams Street and Hunt Street. There are only two (2) routes for evacuation which are Starr and Adams Streets. There is not mitigation in the draft EIR addressing evacuation for residents. Please address how the developer will resolve traffic and evacuations routes. 114-10

Page 4 of 5

6 (j) "Provide a high-quality network of parks, open spaces, and trails that enhancers quality of life and connectivity in the community."

4. The eighty-seven (87) units would eliminate the walking path residents use daily. Please specify how the developer will mitigate the walking path and how will the removal of vineyards preserves our open space. 114-11

Respectfully,

Maria Villegas

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Response to Letter 114
Maria Villegas
November 29, 2021

114-1 The comment asks if the application was submitted to the City in 2010 why does the 1993 General Plan take precedence.

As explained in the Draft EIR on pages ES-1, 2-12 and 3.0-2 through 3.0-3, because the tentative map application was submitted in September 2010 and deemed complete by the City in 2011, this EIR uses the 1993 General Plan as the applicable general plan for the purposes of evaluating the Proposed Project, since 1993 General Plan was the adopted general plan in effect in 2011. The City did not adopt an updated general plan until 2019. Therefore, as required by the Subdivision Map Act, the consistency of the proposed subdivision with the general plan must be evaluated under the 1993 General Plan. However, regarding policies that are adopted to avoid or reduce an environmental effect, the Draft EIR also considers the current General Plan (adopted 2019).

114-2 The comment wants to know what the approval date was for the application and how long an application is valid.

The application was deemed complete by the City in 2011. The City has determined that the application is still valid, and the applicant continues to seek approval of the Project.

114-3 The comment is asking if an extension has been requested to prevent a lapse in permits; the basis for the extension; time frame for filing an extension and what work has been completed since the extension.

The application does not require an extension, as described below under Response to Comment 114-4. The tentative map has not been approved, no City permits or other agency permits have been issued for the Project, and no work has been done on the Project.

114-4 It appears the commenter believes an extension is required for the application and if not then the Project would be subject to compliance with the current (2019) City General Plan.

Please see Responses to Comments 114-1 and 114-2 which explains why the application is not subject to an extension and why the Project is required to be evaluated under the 1993 General Plan. In addition, the Project also reviewed consistency with the City's General Plan Update 2040 that was adopted in 2019.

114-5 The comment notes the City issued a completeness letter for the application in 2011. The commenter appears to be asking why the City has not yet taken action on the Project.

As noted on page 2-11 of the Draft EIR, the City prepared an EIR to evaluate the Proposed Project in 2012 and in 2013 the Proposed Project came before the City's Planning Commission for review. The Planning Commission did not take action on the Proposed Project at that time and the item was continued. Additional information was subsequently submitted by the Project applicant, which resulted in the need to revise and update the Draft EIR. The original EIR consultant was not able to revise the EIR so the City retained a new EIR consultant in 2017 to prepare a new EIR to evaluate the Project.

114-6 The comment is requesting to know why the Project is not required to be evaluated under the City's current General Plan since the 1993 General Plan was developed to oversee 1993 through 2010.

Please see Response to Comment 114-1.

114-7 The comment appears to be questioning the accuracy of information contained in the 1993 General Plan pertaining to the City's water supply, electrical grid, and climate change. It appears the commenter believes data from the 1993 was used to address potential impacts to these services.

Please see Response to Comment 9-4 that addresses these concerns as well as Master Response 2 that addresses water supply.

114-8 The comment is referencing the Findings of Fact and Statement of Overriding Considerations prepared for the City's 2040 General Plan, which was adopted in May 2019 and states the Draft EIR in inconsistent with the 2019 General Plan.

The St. Helena General Plan Update 2040, adopted in 2019, is the City's current general plan. Any development application made today would be considered under the 2040 Plan. However, as stated in Response to Comment 114-1, the Project application was deemed complete in 2011. The Subdivision Map Act requires that the proposed subdivision be evaluated under the general plan that is in effect at the time the application is deemed complete. Therefore, the consistency analysis for the proposed subdivision is on the general plan adopted in 1993. The Draft EIR therefore considers consistency with the 1993 General Plan, but also considers policies of the 2040 Plan that relate to the avoidance or reduction of an environmental effect.

114-9 The comment is referencing the City's mandatory water conservation requirements and requests clarification on limits for hand washing and flushing of toilets and the impact this would have on the City's existing development.

The comment appears to be general in nature and it is not clear what the commenter is requesting be clarified. The comment is not addressing the accuracy or adequacy of the Draft EIR; therefore, no further response is required. Please see Master Response 2,

which provides additional information on water and the City's Water Neutral Policy and Chapter 13.12, Water Use and Efficiency of the Municipal Code.

114-10 The comment references emergency evacuation and how the Project proposes to address traffic and emergency access.

Please see Master Response 1 that addresses emergency access and evacuation concerns.

114-11 The comment asserts that the Project would eliminate the existing walking path and the on-site vineyards and wants to know how this will be mitigated and how removal of the vineyards preserves open space.

The Project does not propose removing the existing trail or levee maintenance road, as explained in Section 3.12, Public Services and Recreation on page 3.12-17 and on page 2-23 in Chapter 2, Project Description. The existing trail parallel to the maintenance road would remain and would not be altered by the Proposed Project. The Project would not impact the existing walking path and no mitigation is required.

The existing vineyards on the Project site would be removed with the exception of the one-acre portion located in the "panhandle" portion of the site. The vineyards are not officially protected, so no mitigation is required.

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Comment Letter 115

Maria Villegas
1166 Meadowcreek Circle
St. Helena, Ca 94574

Maya DeRosa
Planning and Building Director
City of St. Helena, Planning & Community Improvement Department
1572 Railroad Ave. St. Helena, Ca 94574

Dear Maya,

The following are my questions on the draft EIR for the Hunter Project.
Thank you,
Maria

3.3 Air Quality
City of St. Helena 1993 General Plan
Policy 8.2.6: Minimizing local adverse air quality impacts related to construction by requiring dust abatement procedures for local projects.

Toxic Air Contaminants

"Sensitive receptors are groups of individuals, including children, older adults, the acutely ill, and the chronically ill, that may be more susceptible to health risks due to chemical exposure. **Sensitive-receptor population groups are likely to be located at hospitals, medical clinics, schools, playgrounds, childcare centers, residences, and retirement homes.** As previously discussed, the nearest sensitive receptors are single-family residences located approximately 20 feet east of the Project site.

Question:

With medical advancements, there are more and more individuals receiving medical care at home. This would include chemotherapy, dialysis and respiratory care. Please address mitigation for the above individuals (sensitive-receptors) including pediatric data and detailed dust control for the project. 115-1

3.6 Geology and Soils

Soil Settlement and/or Collapse

"…As discussed above, the subsurface investigation of the site found that there is an approximately 3-foot-thick layer of clayey silts under recently placed and compacted fill that may be prone to soil settlement or differential settlement. Based on the findings of the geotechnical investigation, the settlement risk at the Project site presents a potentially significant hazard (Appendix F)"

Question:
The settlement risk at the Project site presents a potentially significant hazard, why is the developer inclined to build in a hazardous zone? 115-2

Seismic Hazards

"The Project site is mapped as having a moderate liquefaction susceptibility, based on the Quaternary geologic units described above (USGS 2006). …According to the well completion report for the onsite well, the static water level was recorded as being 11 feet bus in 1992 (DWR 1992). Given these factors, there is a potentially significant risk for liquefaction at the Project site."

State Regulations

The statewide minimum public safety standard for mitigation of earthquake hazards (as established through the California Building Code (CBC), AP Act, and the Seismic Hazards Mapping Act) is that the minimum level of mitigation for a project should Reduce the risk of ground failure during an earthquake to a level that does not cause the collapse of buildings for human occupancy…"

Question:
With the significant risk for liquefaction as described in the draft EIR will the ground be able to withstand a 6.0 magnitude earthquake? The recommended mitigation seems insufficient. Please clarity.

115-3

Question:
According to State regulations, a minimum level of mitigation should reduce the risk of ground failure during an earthquake to buildings for human occupancy.
Please address how the multiple soil hazards reported will be mitigated, given "no seismic hazard zones have yet to be delineated for the City including the Project site."

115-4

Significant and Unavoidable Impacts

"The proposed Project would result in the following significant and unavoidable transportation impacts. **There is no feasible mitigation available to reduce the impacts to less than significant."**

- The proposed Project would generate an increase in project-specific vehicle miles traveled (VTM) that would exceed the Office of Planning and Research's (OPRs) threshold of 15% below that of existing development .

- Under cumulative conditions the Proposed Project would generate an increase in VMT that would exceed the threshold.

Question:

The applicant recognizes "there is no feasible mitigation available to reduce these impacts to less than significant."

Please make clarify why the current draft EIR is accepted as complete.

115-5

Response to Letter 115
Maria Villegas

115-1 The comment references construction-related air emissions and how the Project is proposing to address these concerns.

Section 3.3, Air Quality, of the Draft EIR, provides a detailed analysis of construction-related emissions and measures to reduce impacts.

115-2 The commenter asks why development is proposed on a site that, as noted in the Draft EIR, presents a risk of settlement.

The potential for settlement to be a concern for the Project is evaluated under Impact 3.6-2 on page 3.6-24. Because there is the potential the recompacted native and non-native soils could be unstable mitigation measure GEO-1 is required which ensures that a design-level geotechnical report be prepared and expands upon the typical steps completed as part of standard building and grading permit approvals in order to ensure weak/compressible soils are mitigated and the potential impact would be less than significant.

115-3 The comment is asking if the Project would be able to withstand a 6.0 magnitude earthquake and questions if the mitigation is adequate to address the potential for liquefaction.

The Draft EIR describes liquefaction starting on page 3.6-14 and notes the Project site is mapped as having a moderate liquefaction susceptibility; however, due to fairly shallow depth to groundwater the risk for liquefaction to occur is potentially significant. Mitigation measure GEO-1 requires a design-level geotechnical report be prepared to identify specific site preparation methods, grading practices, foundation designs, and other recommendations appropriate for minimizing damage from weak soils, expansive soils, differential settlement, and seismic hazards, including liquefaction.

115-4 The comment asks how the soil hazards onsite would be mitigated “given ‘no seismic hazard zones have yet to be delineated for the City including the Project site.’”

As stated in the Draft EIR on page 3.6-14, the California Geological Survey has not mapped the Project site area as part of the Seismic Hazards Zonation Program. Implementation of mitigation measure GEO-1 would ensure that the required final design-level geotechnical report be consistent with Special Publication 117A which specifies how to mitigate seismic hazards through site preparation methods (e.g., removal of liquefiable soils, use of engineered fill, and soil treatment methods) and/or foundation design (e.g., deep foundation

systems). Adherence to Special Publication 117A and building code requirements have proven sufficient to reduce potential impacts to less-than-significant levels.

115-5 The comment references the significant traffic impact to an increase in vehicle miles traveled (VMT) and asks if the Draft EIR is complete since no mitigation is available to address this impact.

The CEQA Guidelines recognize that a project may result in significant impacts that cannot be mitigated to a less-than-significant level. The City can approve a project that has a significant and unavoidable impact providing the benefits of the project outweigh the adverse environmental effects.

Comment Letter 116

From: LORI VRABEL <winterchampagne@comcast.net>
Sent: Monday, October 11, 2021 3:44 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Opposing Hunter Subdivision

Dear Maya,

I just want to register my strong opposition to the Hunter Subdivision Project. We are in a severe and long term draught so the additional water use and sewage requirements at this time are totally ridiculous. We are also inundated with traffic on weekends and the addition of these homes would greatly increase that frustration. We also do not have sufficient escape routes for fire evacuation as it is. Thank you for your consideration of my objections.

116-1

116-2

Respectfully,
Lori Vrabel

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Response to Letter 116
Lori Vrabel
October 11, 2021

116-1 The comment expresses opposition to the Project. The comment also raises two general concerns related to the City's water supply and sewage capacity.

The commenter's opinion is noted and forwarded to the decision-makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, please see Master Response 2, which addresses the City's Water Neutral Policy and Master Response 4 that addresses wastewater capacity.

116-2 The comment expresses concern related to the Project's impact on local traffic and emergency evacuation.

Please see Master Response 1 that addresses concerns associated with emergency evacuation. The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. The analysis includes consideration of motorized vehicle traffic impacts on roadway capacity, vehicle-miles travelled (VMT), and potential impacts to transit, bicycle, and pedestrians.

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Comment Letter 117

From: Ree Whitford <reewhitford@gmail.com>
Sent: Saturday, November 6, 2021 7:52 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Hello Judy,

I totally agree that a massive project such as the Hunter Project is inappropriate in these times of over taxed infrastructure and of course, the drought. 117-1

I hope we can find ways to convince the politicians to stop approving endless growth. The increased taxes don't pay the costs inflicted on all of us! 117-2

Thank you for speaking out for sanity!

Best,

Ree

Ree Whitford

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Response to Letter 117
Ree Whitford
November 6, 2021

117-1 The comment states opposition to the Project and makes reference to the drought.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, please see Master Response 2, which addresses the Project's impact on the City's water supply.

117-2 The commenter is opposed to the Project and to more development within the City.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required.

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Comment Letter 118

From: mark willey <mark.c.willey@gmail.com>
Sent: Saturday, October 30, 2021 1:05 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Jeanette Cheeseman <jkc525@msn.com>
Subject: [External] For ST. Helena's planning department / Hunter Subdivison project

TO: Maya DeRosa, Planning & Building Director
City of St. Helena, Planning Department
1572 Railroad Avenue, St. Helena, California 94574

Good day Ms. DeRosa,

Please accept our comments regarding the Hunter Subdivision Project: While we agree that adding additional affordable housing can help our community we have concerns with the proposed location of this project. As St. Helena residents at 36 Laguna Seca Ct. we thank you for allowing my wife and I to share our serious concerns. 118-1

1) Safety-- having an affordable housing complex located by 2 retirement communities will bring crime. Vineyard Valley will be easily accessible by the planned development residents and the new complex will also bring crime to The Springs Retirement complex which is close by as well. Residents of both communities are older and will be easy victims. Note that the Vineyard Valley community which consists of mobile homes has many elderly residents that live independently with virtually no security systems and with easy access to their homes and vehicles it further increases the likelihood of crimes being committed. 118-2

Fire / earthquake evacuation-- the residents of VV recently held a practice evacuation driving drill which included, upon the decision of town officials and safety experts, to utilize the area being proposed as a road for the new development. So now this emergency access goes away and is replaced with more traffic and maybe not even accessible to all residents? Are we now saying our residents' safety is not as important as new affordable housing? One assumes also that the increased traffic into the area will slow the ability of medical response and also fire and police when the needs occur. One further assumes that the additional houses and population will increase the probability and likelihood of fires, ie BBQ's, smoking, etc. What happens to our community seniors when they must be evacuated and lose their homes? Or potentially their lives. Is that what is best for our community? Who will pay the cost of additional police, fire, medical equipment and personnel? Why were these and the following not either at all, or completely, addressed in the environmental impact report nor by the developer? 118-3

2) Wildlife--very near the proposed development there is a habitat restoration area that is posted keep out. We believe the development will severely and negatively impact this area. One would guess that the housing will include children and pets that may run free into this protected area. Have studies been done to address and successfully mitigate this and related issues? 118-4

3) Loss of use of the walking trail for residents and the negative impact on the wineries built along the pathway-- Napa Valley is known for its beauty, wineries etc.. The development will have a negative effect on existing residents and visitors to the area who will no longer be able to enjoy the openness and use of the walkway and current open areas proposed to be lost to the project. Vineyard Valley residents and visitors often throughout the day use the walkway along the proposed Adam Street extension to walk to town, to walk their pets and to just enjoy the beauty of the surrounding area. Taking this away 118-5

also forces more traffic onto either Pope Street, or along the new proposed extension now with vehicles again putting our seniors, pets and others in potential danger. 118-6

There are existing and new wineries that have been built to take in the existing views and experience and if the project is approved the existing wineries customers, the number of which will surely drop, will be looking out at affordable housing. We do not see how the proposed development will be anything but negative for the wineries built and being built along the area. Millions have been invested to utilize the surrounding area with vineyards and wineries, shouldn't the area be used the same? Let's increase the visitors and residents' experience which will increase St Helen's revenue while not severely hurting our existing community residents and businesses. 118-7

4) Water- St. Helena has been in drought conditions for years. With climate change the conditions are expected to worsen and will continue to do so. This year we were forced to discontinue exterior watering, which while understandable, hurts our lifestyle and even resale and we wonder how close were we, as a community, to enter into mandatory water rationishing? 118-8

We reviewed a comment and offer by the developer and his consultant to provide low flow water units to a certain number of existing homeowners which would, according to the developers consultant, actually, even with the new housing, lessen the current usage of water for all of St. Helena. WOW, this is probably one of the most ludicrous proposals to mitigate a very serious environmental issue. Seriously, let's build almost a hundred of new homes / townhouses/ apartments which increase the population by much more than the total units built, then install low flow water toilets and faucets in a few thousand homes, assuming existing residents accept the offer; or will this be mandated by the Town? ,and the ultimate net water affect is a savings to all the water used in St. Helena. There is no way. The water use and needs in St Helena will go up, and dramatically. Where will the water come from? We also wonder who pays any additional repairs that are found to be necessary should a resident accept the new low flow units? Forcing, or even offering, units to an existing resident and then having them incur additional costs does seem like a positive step for our community. Oh, and will the developer guarantee contractors will be available to do the work? What about the added impact to the Town's existing infrastructure? Roads and utilities will fail sooner and maybe more often with the added use. 118-9 118-10

While we appreciate the County and town's concerns to address the mandate for affordable housing, we must oppose the Hunter subdivision development based on numerous factors, some as touched on above. 118-11

Respectfully submitted, Mark and Jeanette

Best regards,

Mark Willey
707-480-3645

Response to Letter 118
Mark Willey
October 30, 2021

118-1 The comment serves as an introduction to the concerns that follow.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

118-2 The comment states an opinion that having an affordable housing complex located next to retirement communities would increase the likelihood of crimes being committed.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. CEQA does not require an analysis of social issues such as criminal activity. The comment is noted and forwarded to the decision makers for their consideration.

118-3 The comment states an opinion that emergency evacuation would be made more difficult due to the Project's location and number of residents and raises concerns regarding emergency vehicle access.

Please also Master Response 1 for more details related to emergency evacuation for residents.

118-4 The comment states an opinion that the Project may result in children and pets disturbing the habitat restoration area near the Project site.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

118-5 The comment states an opinion that the loss of the walking trail would impact views and the enjoyment of residents and visitors to the site.

Please see Response to Comment 114-11.

118-6 The comment states an opinion the Proposed Project would increase traffic congestion on Pope Street and along the roadways leading to the project site.

Please see Response to Comment 108-8.

118-7 The comment states an opinion that the Project would result in a decrease in visitors and revenue at local wineries.

The comment does not identify any specific areas where the Draft EIR or analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 2-4 regarding economic concerns.

118-8 The comment states an opinion that water restrictions hurt residents' lifestyles and resale values.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

118-9 The comment states an opinion that toilet retrofits would not mitigate water impacts from the Project.

Please see Master Response 2.

118-10 The comment asks who would be responsible for repairs to toilet retrofits and if it is guaranteed that contractors would be available to do the work. The comment also states there would be an added impact to the City's infrastructure.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 4 regarding the City's wastewater infrastructure.

118-11 The comment states opposition to the Project in light of the concerns presented in the comment letter.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

Comment Letter 119

-----Original Message-----
From: Connie Wilson <clw1956@comcast.net>
Sent: Sunday, October 31, 2021 4:30 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project Opposition

Dear Ms. DeRosa,

I wish to express my opposition to the Hunter Project. I believe that no new commercial or residential construction or projects should be considered at this time with our dire water situation. Additionally, the Hunter Project has been continually rejected by the majority of St. Helena citizens. 119-1

With our water and sewer problems and historical local opposition, this project should not be considered for approval.

Thank you.

Connie Wilson
1658 Scott Street
St. Helena

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Response to Letter 119
Connie Wilson
October 30, 2021

119-1 The commenter states opposition to the Project and references the City's sewer infrastructure, water supply, and historical opposition to the Project.

The commenter's opinion is noted and forwarded to the decision makers for their consideration. The comment does not address the accuracy or adequacy of the Draft EIR; therefore, no further response is required. However, please see Master Response 2 which addresses the Project's impact on the City's water supply and Master Response 4 which addresses concerns regarding the City's sewer system.

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Comment Letter 120

-----Original Message-----
From: Terry Wood <terrywod1798@gmail.com>
Sent: Tuesday, November 2, 2021 10:03 AM
To: Public Comment <publiccomment@cityofsthelena.org>
Subject: [External] Water

Where will the additional water come from?
Terry Wood

120-1

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Response to Letter 120
Terry Wood
November 2, 2021

120-1 The commenter asks where water to supply the Project would come from.

Water to support the Project would come from a variety of sources, as discussed in Section 3.13, Utilities and Service Systems. Please see Master Response 2 that provides further details on water supply and the City's Water Neutral Policy and Municipal Code.

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Comment Letter 121

Angela M. Zivkovic, PhD
1180 Starr Avenue
St. Helena, CA. 94574

City of St. Helena Planning Division
1572 Railroad Avenue
St. Helena, California 94574
(707) 967-2783
mderosa@cityofsthelena.org

Dear Members of the City Planning Commission of St. Helena,

I am writing regarding the Hunter Project Draft Environmental Impact Report (EIR). I have carefully reviewed the report and am writing to express serious concerns about the findings of the report and, more importantly, all of the considerations that are **missing from the report.** In particular I am **extremely concerned** about the **lack of consideration of the environmental impacts with regard to climate change.** Instead of taking into account the changing landscape of future impacts on such issues as water, infrastructure, and natural disasters, **this draft EIR uses old data, outdated reports, and irrelevant projections** based on assumptions about the climate staying the same as it always was, of water availability staying predictable, of flood risks fitting outdated "100-year flood plain" approaches that are no longer being used by the Federal Emergency Management Agency (FEMA), and sewage capacity and other reports based on outdated materials such as reports from as long ago as 2008 and 2011. 121-1 121-2

Climate change is happening. We all know it and have lived it and seen it over the last several years. Each fire season is worse than the last, each winter is warmer than the last, each year the weather patterns become more unpredictable. The recent conclusion from the United Nations Glasgow Climate Change Conference (COP26) meeting is that even if all countries that pledged to fully implement changes needed to meet agreed upon greenhouse gas reduction goals are actually able to meet those goals, we are still on a trajectory to see increases in the earth's temperature of at least 1.8 degrees Celsius (https://www.washingtonpost.com/climate-environment/2021/11/09/cop26-un-emissions-gap/). This means that the recently experienced natural disasters in our area including wildfires, flooding, mud slides, and droughts, are only going to be more frequent and exacerbated over the next 10-20 years and beyond. 121-3

What were once "100-year flood areas" will now effectively need to be renamed "it could flood any time" areas, highlighting the issue of the levy and the fact that **the Hunter project is in a high-risk flood zone,** which is inadequately addressed in the EIR. Furthermore, more frequent wildfires, as we have seen recently, will require more frequent evacuations, thus **public safety and transportation during emergencies and natural disasters** is another area that was not adequately addressed by the EIR. Finally, we are currently and in all likelihood will continue to experience droughts of unknown severity and duration and **we barely have enough water for the current citizens of St. Helena,** and this threat to our future water supply is inadequately 121-4 121-5 121-6

addressed in the EIR. I have addressed each of these issues, as well as several additional issues in my comments below.

121-6 Cont.

1) **The Hunter Project is in a flood zone behind a levy that is NOT supported by federal funds, and when the levy fails and the homes within the project are flooded the residents of the city of St. Helena will be fully responsible for paying for repair of the levy and all the damage to the homes.**

For the first time in 50 years the Federal Emergency Management Agency (FEMA) is changing its flood insurance program to better reflect the real risks associated with flooding in certain high-risk zones, and that take into account climate change. **The entire idea of "100-year flood" zones is now outdated and no longer being used** because it uses outdated projections about yearly percentage risk of flooding based on irrelevant, old information about weather patterns over the last 100 years. The new Risk Rating 2.0 is instead tailored to each individual property, and is designed to "adapt and re-adjust rates based on a changing, unpredictable climate," clearly highlighting the fact that **the risk of catastrophic floods and failing levies in certain high-risk areas is so volatile as to be unpredictable** (https://www.houstonpublicmedia.org/articles/news/energy-environment/2021/06/24/401402/femas-changing-its-flood-insurance-program-heres-how-it-will-impact-texans/). The new approach also takes into account more causes and types of flooding, including storm surge, river overflow and heavy rainfall, because **climate change is increasingly and unpredictably leading to flooding due to heavier rain falls, sea-level rise, and stronger wind and storm weather patterns**. The new risk rating policy is in effect starting October 1, 2021 for any new projects (https://www.fema.gov/flood-insurance/risk-rating). This is **brand new information that is not in any way reflected in the EIR** and in fact, all of the material in the EIR with regard to the fact that this project is in a high-risk flood zone, behind a levy that is city-managed and maintained rather than being maintained by the Army Corps of Engineers, is completely ignored by the EIR.

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According to the official FEMA map of the city of St. Helena, the Hunter Subdivision project is clearly within a flood zone (https://map1.msc.fema.gov/firm?id=06055C0264E). Although the city paid for consultants to try to mitigate this risk by providing independent evaluations that take into account the mitigation of the flood risk due to the existence of the levy, as I pointed out above, this all goes out the window **with the current increased risks we are facing due to climate change**. How does the city plan to provide and pay for the rescue of hundreds of additional citizens in this high-risk area, repair the failed levy and all the damaged homes WHEN (not if) there is a catastrophic flooding event, possibly as early as within the next 5-10 years? The unfortunate truth is that this parcel of land is in a flood zone. The entire parcel was purchased for a laughably low amount that currently cannot get you an average 2-bedroom, 1-bathroom home in this town. **This parcel was sold cheap, because it should never be built on. A levy was constructed against the recommendation of the Federal government**, which walked away from the project because it is not a good idea to build homes in a flood zone, and **the city of St. Helena and its residents are entirely financially responsible for the maintenance, repair, and when needed, re-building of the levy when it fails**. Where is the accounting on the financial implications of such an undertaking and the environmental impact of such a financial burden on the city and its citizens? Not to mention the financial toll on the

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people who will have bought these houses falsely deluded into thinking that they were "safe" behind the levy? The simple truth is that levies fail. Even a brand new, world-class levy built by the Army Corps of Engineers to protect the city of New Orleans failed a *second time*, after it was professionally rebuilt.

It was only last month, as we all remember so vividly, that we experienced an "atmospheric river." Anyone who lives near the Napa River here and walked out to take a look over the bridge saw for themselves that the water rose well beyond the riverbed, and in some places flooded over the river banks. And this was, even in comparison to the atmospheric storm that we experienced last year, actually a fairly modest event. What will the next one look like? We simply do not know. But one thing is for sure: there will be a catastrophic weather event, and the levy will fail. The only question is when. The likely NEW answer, given the accelerating rate of climate change, is that it will be in significantly less than 100 years.

121-10 Cont.

121-11

2) **Climate change is drastically and unpredictably altering weather patterns, and the incidence of wildfires and all of their consequences, both acute and long-term, is increasing to unprecedented rates that are surpassing all predictions based on historical data.**

According to the National Interagency Fire Center the state of California faced over 8,000 fires that burned over 500,000 acres of land in 2002 (https://www.predictiveservices.nifc.gov/intelligence/2002_statssumm/fires_acres.pdf). In 2020 those numbers jumped to nearly 10,000 fires that burned over 4 million acres of land (https://www.predictiveservices.nifc.gov/intelligence/2020_statssumm/fires_acres20.pdf)! The state of California is facing unprecedented increases in wildfire incidences just in the last 20 years, at a time when the earth's temperature has increased by less than 1 degree Celsius (https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature), while **the *best-case* scenario projections for temperature change, as pointed out above, are on the order of 1.8 degrees Celsius over the next 20 years, strongly suggesting that the incidence of wildfires is only going to increase**. The current EIR does not account for these increases in risk due to wildfire. This is a problem in two specific ways: 1) more fires means more evacuations and more people that need to be able to leave in a short amount of time in a limited geographic area with limited evacuation routes, and 2) more fires also means more mud slides due to deforestation and loss of vegetation, which makes our beautiful hills more susceptible to slides when heavy rains hit.

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The recent wildfires in Napa Valley and Sonoma Valley are a sobering reminder of what happens when wild, unpredictable winds coincide with extreme dry conditions and ignition sources. Sometimes those ignition sources are dry lightning, other times sparking generators, other times, devastatingly, even arson. Regardless of the ignition source, which in and of itself is growing in incidence (dry lightning storms in the Napa Valley in August?), the cold, hard truth is that **due to climate change the "wildfire season" in California is increasing. More and more days out of more and more months of the year, from as early as April to as late as December, there are days when the combined conditions of extremely low humidity and high winds make this area ripe for fires to start** (https://www.latimes.com/projects/wine-country-fires-california-sonoma-napa/). The fact is that there are only two ways out of town. Highway 29 and Silverado Trail. These are both narrow, 2-lane highways that can only move so many cars out

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per minute, and that is if all goes well and there are no accidents from people panicking and driving recklessly.

I remember very vividly driving in the middle of the night and listening to the radio with the announcer imploring people to please drive carefully so that our only arteries out of danger are not blocked by overturned vehicles, effectively trapping everyone trying to evacuate to safety. We have no right to endanger the people who already live in this town by building a large development that would add as much as 10% to our overall population in the city, with **an even higher impact on the residents on the East side of town, where the population density is already higher and the population is already more vulnerable, with multiple apartment complexes and low-income housing areas housing our town's low income residents and seniors**, including Hunt's Grove apartments, Stonebridge apartments, the Silverado Orchards Retirement apartments, and the Vineyard Valley Mobile Home Park 55+ community.

This is not the part of town where half of the homes are second homes that sit unoccupied most of the year. **The East side of St. Helena where the Hunter parcel is located is the part of town where there are more people per square mile that need to be able to evacuate in an emergency.** The **draft EIR already concedes that the one environmental impact that cannot simply "be mitigated"** as has so conveniently been down with all of the other potential impacts, **is the unavoidable impact on traffic.** Phrasing it as a simple "traffic problem" makes it seem like just a minor nuisance. This is not about us having to wait a few extra minutes to make a left turn onto Pope Street when we are trying to get to work on a Monday morning. **This could mean the difference between a family being able to evacuate to safety in time, or not being able to do so** because they are stuck in traffic with 500 more people than should be living here all trying to leave their homes at the same time. And make no mistake this is also an equity issue: the very people who are the most likely to have to wait until the last minute to evacuate and thus be in danger when traffic is backed up and they cannot evacuate from fire, are those who do not have the funds to evacuate earlier than "necessary" because they cannot afford to simply pay for a hotel for days on end.

It is also critical to consider that the only way out, on one of only two roads out of town via the Silverado Trail for residents of the East side of town, is **the Pope Street bridge. A historic, narrow, completely inadequate bridge** that if even one car failed, crashed or overturned while trying to drive across, would completely cut off this evacuation route, and **redirect all traffic from the East side of town onto Highway 29.** It is difficult to envision how such an accident could even be remedied in a situation such as this, given that the bridge is barely wide enough for two vehicles to drive across, with no shoulder at all for emergency vehicles to be able to approach. **It is easy to see how very quickly this very real danger of too many vehicles on the road all trying to go the same way out in a nightmare, yet very real, and recently experienced emergency wildfire evacuation scenario, becomes not just an East side problem, but also a problem for those trying to evacuate from the West side of town.**

Just as the recent "atmospheric river" weather event increased our awareness of the high risk of flooding on the Hunter parcel, perhaps even more convincingly it reminded us of the extreme vulnerability of recent burn areas to heavy rainfall, the resulting mud slides, and the further impacts on our roads. I am sure that I do not need to remind anyone of the nightmare traffic that we experienced for nearly 3 weeks following the October 22 weather event that caused a mud slide that resulted in the closing of Silverado Trail

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(https://patch.com/california/napavalley/storm-takes-out-part-silverado-trail). Traffic on Highway 29, from vehicles being redirected from Silverado Trail north and south of town, was atrocious. Many residents who either needed to drive north or south out of town were dealing with traffic delays of up to 2 hours. On a normal day this is very frustrating and disruptive to work and school schedules. In an emergency situation where fast-moving wildfires necessitate immediate evacuations, a situation such as this is a devastating problem for a town that has only two roads out of town.

121-21 Cont.

3) **The severe drought and water shortages we are currently experiencing in the city of St. Helena are a harbinger of even worse times to come. We simply cannot support a large development which will drastically increase water demands on an already strained and inadequate system that can barely supply enough water to our current residents.**

Unfortunately, our water shortage problems here in St. Helena are happening all over the state. **Wells are running dry** (https://calmatters.org/environment/2021/08/california-groundwater-dry/). Despite changes to California ground water laws in 2014 to enact sustainable practices that protect ground water, seven years later wells around the state continue to run dry. Current climate change projections, as outlined already above, are dire, and suggest that drought severity, intensity, and duration will only worsen over the coming decades. We simply cannot rely on old projections about water availability because we are in uncharted territory. Our ground water sources are not being normally replenished. The normal water cycles are not operating the way they used to. And it is not just wells that are running dry.

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Snowpack in the Sierras normally "supplies about 30% of water statewide when the spring melt comes and water runs off to be captured in the state's system of reservoirs" (https://www.sfgate.com/bayarea/article/Sierra-snowpack-satellite-image-atmospheric-river-16568005.php). But last year's snowpack was only 59% of average, and even more disturbing and unexpected was the fact that 80% of the already lower than normal, predicted water runoff was simply soaked up or evaporated because the soils were so hot and dry, severely impacting water levels in reservoirs across the state. Even after the "atmospheric weather" event in October which brought heavy rains and a rise of over 20 feet to Lake Oroville, for example, according to the Department of Water Resources, this reservoir is at only 27% capacity. So it is **not just our ground water and wells that are drying up, our Sierra snowpack, and thus reservoirs and rivers are also drying up.** As mentioned earlier, climate change means that we are experiencing more and more warmer and warmer days, and this means that **even if we do get big storms the snowpack does not stick around, and even when we do get runoff from the snowpack, the earth is so parched that the water simply disappears on its way to our reservoirs.**

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Our own reservoirs and water sources are not doing so well. This summer, as I am sure we are all quite vividly aware of given the astronomical water bills, we entered severe drought restrictions (Phase II Water Regulations), with water use limited per household, and very unpopular and extreme fines being put in place in an attempt to mitigate the very real risk that we could run out of water before the reservoir was replenished by winter storms. We were lucky this time, we did happen to get the big storm in October that saved us from imminent disaster, but next time we may not be so lucky. What is our city's plan for dealing with these new, unexpected, unpredicted risks of severe and sustained drought conditions due to climate

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change? How do we plan to supply water to even the current residents, much less to 500 more residents if the Hunter parcel were to be developed? The current draft EIR does not adequately address these issues. Laughably simplistic solutions like the use of "low flow toilets" as a mitigation solution for our real water shortage issues that are only going to worsen over time, are so inadequate as to be insulting. **We cannot rely on water supplies staying what they were even in the recent past, or being predictable based on what we used to know about how much water we might expect any given year based on old weather patterns.** In fact, it is quite clear that this year's severe drought and water shortages are likely to occur with much greater frequency in the coming years and decades, as our ground water supplies, snowpack, river flows, and reservoir levels continue to be severely impacted by climate change. The draft EIR does not address these very real water issues in any real way.

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There are several additional environmental impacts that are inadequately addressed by this draft EIR:

1) The **aesthetics** of the entire East end of the town are inextricably linked with the vineyards, wetlands, and public outdoor space in the designated project area. Every day dozens of St. Helena residents, from both the East and West side of town, access the areas in and around this site for recreation, as do visitors and tourists to the area. If the Hunter parcel were to be developed it would irreversibly damage the aesthetics of this town as a small, agricultural town with historic significance. No longer would one be able to walk on the walkway through the area and have a view of the hills on either side of the valley, and of the natural habitat restoration area. The housing development would also permanently alter the aesthetics of the East Side of town, by drastically increasing traffic and congestion in this area.
2) As a direct result of the building work itself and the subsequent increase in traffic and congestion to and from the development by hundreds of new residents, there would also be significant impacts on the **air quality** of the East side of town, which would additionally impact the West side of town, and to all of the current residents as well as wildlife that live in the protected wildlife habitat zone directly adjacent to the development. The impacts on air quality from hundreds of additional vehicles driving to and from these residences, and from the extension of Starr Avenue and Adams Street, with the additional "cutting over" of vehicles from Main Street and Silverado Trail, would have a significant cumulative and negative impact on air quality. This would be especially true during the summer, when air quality is already severely impacted.
3) It is difficult to fathom how the Hunter development project could possibly fit in with the goals and aspirations of our community for **public services and recreation** as well as **public utilities**. As it is, our community is barely able to meet the needs of current residents with regard to basic public services, recreation and utilities. Everything from schools and recreational programs to water, sewer, and garbage collection would be severely impacted by a construction project that would increase the population of St. Helena by 10% practically overnight. It is difficult to understand how our schools could possibly continue to provide quality teaching to a student body that could grow by 10% from one year to the next. Where would the funds for the additional space and teachers come from to support such rapid growth? Our current water and sewage treatment

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facilities are severely in need of repair and maintenance, and are barely able to supply the basic needs of current residents. A substantial amount of infrastructure development would be required to accommodate any growth, much less a 10% increase all at once as would occur with a single development project of this scale and size, relative to the small size of our town. There is zero evaluation of how adding over 500 residents could possibly be accommodated by the current building plan. The plan naively states that the sewage would simply be diverted to existing sewer lines on Starr Avenue and Vineyard Valley. It is very disturbing to note that there is already something amiss with the sewage on Starr Avenue, where in the fall especially there is often a bad sewage smell on the corner of Starr Avenue and Hunt Avenue, clearly indicating an issue with capacity. The idea that we would simply add the sewage from over 500 additional residents to this already overwhelmed system is unsupportable.

4) Finally, it is important to note that **the Hunter parcel is very likely to be an important wildlife habitat area**. There are hundreds of waterfowl, including geese and ducks, that nest or stop off on that parcel every winter on their migratory route, a fact that is easily noted by anyone who regularly uses the walking path adjacent to the Hunter parcel for recreation in the winter time. According to the California Farm Bureau Federation as many as 60% of waterfowl in the Pacific Flyway, the main migratory route for water fowl on the West Coast, use California wetlands and grasslands for habitat in the winter months (https://www.cfbf.com/wp-content/uploads/2019/06/CommitmenttoConservation.pdf). **The draft EIR does not in any way address the impact of the proposed development project on the waterfowl that currently use this land in the winter months on their migratory route.**

121-31 Cont.

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I request that the city planning commission address the concerns expressed above about the inadequacy of the draft EIR for the Hunter parcel.

Sincerely,

Angela M. Zivkovic

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Response to Letter 121
Angela Zivkovic

121-1 The comment states an opinion the Draft EIR is inadequate and does not address environmental impacts due to climate change.

The comment does not identify any specific areas where the EIR or analysis is inadequate. However, please see Master Response 2 and Responses to Comments 3-1, 9-4 and 14-9 that address concerns associated with climate change.

121-2 The comment states an opinion that the Draft EIR used outdated and irrelevant data, including the 100-year flood plain approach no longer used by FEMA, based on assumptions that the climate would remain unchanged.

Please see Master Response 3 and Response to Comment 31-1.

121-3 The comment states an opinion that climate change will exacerbate natural disasters including fire, floods, and droughts.

The comment does not address the adequacy of the Draft EIR, but instead expresses the commentor's opinion about the project. The comment is noted and forwarded to the decision makers for their consideration.

121-4 The comment suggests that the flood analysis in the Draft EIR is inadequate and claims that the Project site is in a high-risk flood zone.

As detailed in the Draft EIR on page 3.9-7 in Section 3.9, Hydrology and Water Quality, the Project site is not located within a FEMA designated Special Flood Hazard Area as a result of construction of the levee. The newly constructed Napa River levee is designed to provide 200-year flood protection with additional flood protection provided by the additional freeboard. The Draft EIR includes a thorough description and analysis of the flood protection measures that the levee provides starting on page 3.9-7 through 3.9-13 as well as pages 3.9-44 and 3.9-45. See also Master Response 3 for further information on the levee.

121-5 The comment states an opinion that public safety and transportation during emergencies and natural disasters is not adequately addressed in the Draft EIR.

Please see Master Response 1.

121-6 The comment states an opinion that the threat to future water supply is not adequately addressed in the Draft EIR.

Please see Master Response 2.

121-7 The comment claims that the levee is not supported by federal funds and that the concept of a 100-year flood is outdated.

Please see Master Response 3 for a response to comments regarding the levee.

121-8 The comment claims that the Draft EIR ignores "the fact that this Project is in a high-risk flood zone" and is City managed and maintained rather than maintained by the US Army Corps of Engineers.

As described in Response to Comment 121-4, the Project site is not located in a Special Flood Hazard Area as a result of construction of the levee. The levee provides a 200-year level of flood protection, rather than the "100-year flood plain" referenced in the comments. The manner in which inspection and maintenance responsibilities for the existing levee are assigned are not environmental effects related to the Proposed Project. Furthermore, under CEQA, the effects of the environment upon the project are not "impacts." Rather, CEQA requires the lead agency to consider the ways in which the project effects the environment. The potential hydrological effects of the Project, including the potential to impede or redirect flood flows, are considered in Section 3.9 of the Draft EIR. See also Master Response 3 for further details regarding the levee, required certification, and maintenance responsibilities.

121-9 The comment claims the Project site is within a flood zone and the levee does not account for increased risks associated with climate change.

As detailed in the Draft EIR beginning on page 3.9-7, the Project site is not located within a FEMA designated Special Flood Hazard Area as a result of construction of the levee. In addition, the levee provides greater than the often standard 100-year flood protection with a 200-year flood design to account for other factors such as climate change. See also Master Response 3 for further details regarding the levee and Response to Comment 121-1 regarding climate change.

121-10 The comment states that levee failure would result in a financial burden on the City and its residents.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate, and CEQA does not require a discussion of financial impacts. Therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. However, please see Master Response 3 regarding the potential for levee failure.

121-11 The comment states that the recent atmospheric river event that flooded parts of the river bank was modest in comparison to impending catastrophic weather events.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 3 regarding the Napa River levee.

121-12 The comment states an opinion that wildfire incidents will increase due to climate change.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Responses to Comments 39-5, 76-9 and 82-14 that address wildfire issues.

121-13 The comment states an opinion that the Draft EIR does not account for the increased wildfire risk from climate change and the increase in evacuations.

Please see Master Response 1 and Responses to Comments 121-1 and 121-12 regarding climate change and wildfire concerns.

121-14 The comment states an opinion that increased wildfire incidents would result in more mudslides.

Please see Response to Comment 39-5.

121-15 The comment references the recent wildfires in Napa Valley and Sonoma Valley, and asserts that the wildfire season in California is increasing in length.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. The Draft EIR addresses if the Project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires under Impact 3.8-4 on page 3.8-21 of the Draft EIR.

121-16 The comment asserts that the two evacuation routes out of the City (Highway 29 and Silverado Trail) are inadequately sized.

Please see Master Response 1.

121-17 The comment states an opinion that the Project would endanger existing City residents by adding to the population.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

121-18 The comment expresses concern regarding emergency evacuation and claims the Proposed Project would reduce the ability for residents to safely evacuate the area during emergencies and requests additional mitigation measures.

Please also see Master Response 1, that provides more details related to emergency evacuation for both City residents and Project residents.

121-19 The comment states an opinion that emergency evacuation would be made more difficult due to the Proposed Project and that there are equity issues.

Please see Master Response 1.

121-20 The comment asserts that the Pope Street Bridge is not sufficient to facilitate emergency evacuation resulting in a reduction in access in the event of a wildfire evacuation.

Potential Project impacts along Pope Street and the Pope Street Bridge are analyzed in detail within Section 3.14, Transportation and Circulation of the Draft EIR and within Appendix K, Traffic Impact Study Please see Master Response 1.

121-21 The comment references a recent event in which a mudslide resulted in the closure of Silverado Trail.

Please see Response to Comment 39-5.

121-22 The comment states an opinion that, due to drought conditions and predictions for future droughts, the Project's water demands cannot be supported.

See Master Response 2 for further details regarding the City's water supplies and demands.

121-23 The comment asserts that climate change is decreasing snowpack and water supply.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 121-1.

121-24 The comment asks what the City's plan is for dealing with severe and sustained drought conditions due to climate change and providing adequate water supply for current and future residents.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. However, please see Master Response 2 regarding water supply.

121-25 The comment states an opinion that toilet retrofits are inadequate and that water supply will continue to be severely impacted by climate change. The comment states that the Draft EIR does not address these issues.

Please see Response to Comment 2 regarding water supply.

121-26 The comment states an opinion that the Project would irreversibly damage the aesthetics of the City by impacting views of the natural habitat restoration area and hills on either side of the valley.

Please see Responses to Comments 7-6 and 50-7.

121-27 The comment states an opinion that the Project would alter the aesthetics of the City's east side by increasing traffic and congestion.

The comment does not identify any specific areas where the EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 121-26.

121-28 The comment states an opinion that the increase in traffic generated by the Project would significantly impact air quality and surrounding areas including current residents as well as existing wildlife.

As discussed in Section 3.3, Air Quality, in developing thresholds of significance for air pollutants, the Bay Area Air Quality Management District (BAAQMD) considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be considered cumulatively considerable, resulting in a significant adverse air quality impact to the region's existing air quality conditions. Construction and operations of the Project be substantially lower than the BAAQMD significance thresholds as presented in Tables 3.3-8 and 3.3-9 (DEIR pp. 3.3-32 and 3.3-33). Thus, the Project would have a less-than-significant impact on air quality associated with construction and operation of the Project. The Project would not result in a significant degradation of the area's air quality that could adversely impact City residents and local wildlife.

121-29 The comment states an opinion that the Project would severely impact schools, recreation programs, water supply, sewer capacity, and garbage services.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Responses to Comments 89-2, 97-1 and 108-6 regarding schools; 70-7 and 79-3 regarding parks and Master Responses 2 and 4 that address water supply and wastewater. The Draft EIR addresses the Project's increase in solid waste in Section 3.13 Public Utilities. See Impact 3.13-4 starting on page 3.13-33.

121-30 The comment states an opinion that increased population from the Project would lower the quality of schools and asks where funds would come from in order to support rapid growth.

Please see Response to Comment 8-6.

121-31 The comment states an opinion that current water and sewage treatment facilities are in need of repair and that substantial infrastructure improvements would be required to accommodate growth. The comment asserts that there is no evaluation of how 500 new residents would be accommodated by the Project.

Please see Master Response 2 regarding water supply and Master Response 4 regarding wastewater. Additionally, the City uses a persons per household factor of 2.45 people per unit for medium/higher density residential land uses. Using this factor, the 87 units in the applicant's development proposal (including ADUs) would conservatively generate 213 residents, as explained on page 2-23 in Chapter 2, Project Description.

121-32 The comment asserts that that the Project site is used by various waterfowl species and contends that this use includes nesting.

The Draft EIR concluded that some birds may use the grassland for nesting when sufficient cover (i.e., tall vegetation) is present, but that it is unlikely that the approximately 9.7 acres of mowed annual grassland without a nearby open water area such as a pond or marsh represents critical foraging or nesting habitat for waterfowl species. The Draft EIR includes mitigation (BIO-2) to detect and avoid any nesting birds, including waterfowl that may nest within the Project site prior to commencing any construction activities.

Comment Letter 122

13 Jan 2022

Maya DeRosa Planning Director
City of Saint Helena

Comments RE Hunter EIR: (itemized outline of concerns/questions)

Believe in general there is a too consistent "readiness" or "swiftness" to jump into the LTS (less than significant Impact) category on a majority of topics. I find that to be counterproductive. I believe it would be more sincere to admit and embrace the reasonable conclusion that a project of this scope will have significant impacts in many areas. In my view that admission does not equate to reason to not proceed with an acceptable project that meets code. I am a firm believer in setting expectations based upon realities. Realities that include that this parcel has been designated by the the City of St Helena as MDR and as such should be afforded the expectations and right to pursue those outcomes as defined by applicable code. 122-1

On Alternatives:
General sense is that these are produced as mostly ineffective place fillers or easily dismissible fodder. Understand that is part of EIR format but again find little imagination or actual examination was undertaken to produce any powerful alternative options. I believe an actual consideration and some research into a more dense and more diverse (housing types and household types) solution would have been appropriate and ideally/possibly lead to more powerful and successful solutions. 122-2

3.9-3: 10.9 acres of additional impervious coverage (roads/roofs/walks etc…) (area that would require an engineered solution) out of a total site area of 16.9 acres is difficult to not consider that a substantial alteration of the existing drainage pattern. 122-3

3.12-1: Is there any data that shows the current capacity/state of the SH infrastructure (Water/ Sewer/wastewater) that demonstrates that this additional load would fit within existing capacity? Without that data I believe that jumping to a LTS impact condition is premature. 122-4

3.13-1: See above

3.13-2: Given current and expected ongoing water emergency situation "water supply" is a critical consideration. We are currently in a state that we do NOT have sufficient water supply to serve the existing built environment without taking measures/restrictions. I do not agree that it would in any way be appropriate to ignore that existing and ongoing condition. 122-5

3.13-3: Data on capacity of existing system and demonstration that added load would fit capacity in report? 122-6

3.13-6: I believe the added number of units to a stressed infrastructure system would be "considerable"…by considerable I believe that it should be shown that it was considered and demonstrations made that can show that capacity of the infrastructure can meet the added demand. 122-7

All of the above deal with increased demands on City water and sewer infrastructure systems which have been demonstrated to be under some stress with current demand. To conclude LTS impacts on any of these fronts in my view does not given these items adequate consideration…nor does it outline or generate possible solutions to mitigate or overcome these 122-8

added stressors to the somewhat fragile infrastructure systems. I believe we can and are obligated to service/maintain and upgrade those infrastructure systems that have been long neglected…but first we need to accept there is an issue. 122-8 Cont.

Alt 3- Park/Open Space: Generally find project ignores potentially powerful adjacency to an existing highly valued though under-maintained open space (river loop path). 122-9

2.3 Proposed project: I find it very difficult to support the concept of an incremental approval of a subdivision map that defers to a (to be approved later) housing agreement as the subdivision map itself essentially end runs/usurps/skips ahead a critical piece of our existing Inclusionary Housing Ordinance…setting in place a dynamic that accepts the condition without consideration the segregation of units of different types into sections. 122-10

See item 3.10 Land Use Inclusionary Housing 17.146.050(1)

3.9 H20: Very difficult to come to a LTS conclusion when adding 10.9 acres of impervious coverage to a 16.9 acre undeveloped site (64% of site). 122-11

3.12-2: Missing/ignoring consideration of impact to River loop path/open space adjacent to entire project site. In my view project concept also ignores the opportunity of this adjacency/ connectivity to a highly valued amenity. 122-12

Believe there is an inconsistency in EIR regarding the existing well that represents it as inoperable in one section and claims ignorance to if that well was used to water vineyard but later in appendix shows a high production value that is used to eliminate a large portion of water neutrality requirements. 122-13

On Water neutrality:

333 retrofits or an equivalent fee in lieu…? Experience tells me how difficult it is to find a single (or a handful) of Saint Helena households to retrofit and accomplish water neutrality. At some point as the inventory of retrofit opportunities naturally "evaporate" the mechanisms to achieve better water use need to be introduced into code or practice. In the least it would need to be demonstrated that 333 retrofit households exist. 122-14

In report there is some enticing info on the power of some alternate ways to actually achieve water neutrality (grey water systems etc…) but there is no attached commitment to pursuing any of those options. I believe it would be entirely appropriate for the City to introduce/induce or encourage some solutions that would accomplish water neutrality in a way that begins to service some of our greater critical infrastructure obligations/needs. 122-15

Call text or email with any questions.

Daniel Hale

1616 Madrona Avenue
Saint Helena CA 94574
707.227.4322

Response to Letter 122
Daniel Hale

122-1 The commenter is stating an opinion that there is a desire to conclude an impact is less than significant and that many impacts are significant.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

122-2 The comment states an opinion that the alternatives evaluated for the Project are not well thought out and that a more dense alternative with more housing diversity would be better for this Project.

Please see Response to Comment 89-2.

122-3 The comment references the amount of impervious surface area and states an opinion that the Project would contribute to a substantial alteration to the existing drainage pattern due to the increase in impervious surfaces.

The Draft EIR evaluates the increase in impervious surface area and changes to the existing drainage pattern under Impact 3.9-3 starting on page 3.9-44 in Section, 3.9, Hydrology and Water Quality. The Draft EIR concludes that Project would increase the amount of stormwater; however, increased runoff would be contained within the City's detention basin without the need to expand the basin. Therefore, impacts were determined to be less than significant.

122-4 The comment requests data for the current capacity and condition of the City's water and wastewater infrastructure.

The City has indicated the water and wastewater infrastructure is adequate and have not identified any concerns with the ability to serve the Project, as addressed in the Draft EIR starting on page 3.13-17. Please see also Master Response 4 that addresses the wastewater infrastructure.

122-5 The comment raises a concern regarding adequate water supplies to serve the Project.

Please see Master Response 2 that addresses water supply.

122-6 The comment requests information on the capacity of the City's existing wastewater system to serve the needs of the Project.

Please see Master Response 4 that addresses wastewater infrastructure.

122-7 The comment states an opinion that the Project would further stress the ability of the City's infrastructure to serve the additional load generated by the Project.

Please see Response to Comment 122-4 and Master Response 4 that addresses wastewater infrastructure.

122-8 The commenter disagrees with the finding that the City's water and wastewater infrastructure is adequate to serve and that the existing infrastructure is fragile and has been neglected.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Responses to Comments 122-4 through 122-7.

122-9 The comment states an opinion that the Project ignores the presence of the adjacent trail.

The Draft EIR recognizes the trail specifically in Chapter 2, Project Description and also in Section, 3.12, Public Services and Recreation. Please see also Response to Comment 114-11.This comment does not relate to the adequacy of the Draft EIR (which discusses the trail). The comment is forwarded to decision makers for their consideration. Please see Chapter 3, Changes to the Draft EIR for a figure showing the adjancent trails.

122-10 The comment states an opinion that it is difficult to support the incremental approval of a tentative map followed by other required approvals because the Project is not addressing compliance with the City's Inclusionary Housing Ordinance.

Please see Responses to Comments 19-1 and 84-3 that explain the approval process. There is no requirement that the Tentative Map have an Affordable Housing Agreement approved at the time of Map approval.

122-11 The commenter disagrees that increasing the amount of impervious surface area would result in a less-than-significant impact.

Please see Response to Comment 122-3.

122-12 The comment states an opinion that consideration of the adjacent trail and impacts to the trail are not addressed.

Please see Responses to Comments 84-9, 89-3, 89-5 and 114-11.

122-13 The comment asks if the Draft EIR accurately addresses the status of the onsite well.

The onsite irrigation well is addressed in detail in the Draft EIR in Section 3.9, Hydrology and Water Quality starting on page 3.9-40. The well is currently not operating as noted on page 3.9-43. The history of the well is unknown but it is assumed it was used at one time for irrigation of the onsite vineyard. Please also see Master Response 2 for more information specific to the onsite well.

122-14 The comment questions whether retrofitting homes to achieve water neutrality is practical.

Please see Master Response 2 that addresses this concern.

122-15 The comment asserts that there are alternate ways to achieve water neutrality and encourages the City to look at other solutions to offsetting an increase in water demand.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see also Master Response 2.

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City of St. Helena Regular Planning Commission Meeting

November 2, 2021

CHAIR JOHN PONTE: Good evening. Thank you for coming to the St. Helena Planning Commission meeting of November 2nd, 2021.

There's a paragraph I need to read first before we get started.

This meeting will be conducted pursuant to the provisions of government code Section 54953 as amended by AB 361. It authorizes teleconference meetings under the Brown Act during certain proclaimed states of emergency. The governor of California proclaimed a state of emergency related to COVID-19 on March 4th, 2020.

This teleconference meeting is necessary so that the City can conduct essential businesses and, as permitted under government code Section 54953, in order to protect public health and safety of attendees.

Consistent with government code Section 54953, this Planning Commission meeting will be held via teleconference only and will not be physically open to the public.

Commission members and staff will be teleconferenced into the meeting by audio and/or video. The meeting will be conducted via Zoom webinar.

Ms. Gamero, do you have anything more for us?

SECRETARY XINIA GAMERO: Yes. Thank you, Chair Ponte. I will be sharing my screen here. Okay. Perfect.

Members of the public that wish to participate in public comments can do so by phone by dialing 669-900-6833. At the prompt, you may enter the meeting ID, 845 1730 1810. Press pound, and during public comment, press Star 9 to speak.

Additionally, tonight's meeting will have live Spanish interpretation. To access the interpretation, you will need to use the Zoom application from either your phone, tablet, or computer. Instructions on how to use the Zoom app are listed in English and Spanish on the agenda posted on the City's website.

Once you join the meeting from the Zoom application, you will see a small globe at the bottom or top of the screen. You can click the globe, and you will be able to access the live interpretation. We have Marci and Claudia who are the interpreters for this evening.

That will be all, Chair Ponte.

CHAIR JOHN PONTE: Thank you.

Vice Chair Hale, will you lead us in the pledge of allegiance, please?

VICE CHAIR DAN HALE: Surely.

I pledge allegiance to the flag of the United States of America, and to the republic for which it stands, one nation under God, indivisible, with liberty and justice for all.

CHAIR JOHN PONTE: Thank you. I'd like to call the meeting to order.

Secretary Gamero, will you take the roll please?

SECRETARY XINIA GAMERO: Yes. Commissioner Anderson?

COMMISSIONER AUTUMN ANDERSON: Here.

SECRETARY XINIA GAMERO: Commissioner Segura?

COMMISSIONER ROSAURA SEGURA: Here.

SECRETARY XINIA GAMERO: Commissioner Rothfeld?

COMMISSIONER MARIKA ROTHFELD: Here.

SECRETARY XINIA GAMERO: Vice Chair Hale?

VICE CHAIR DAN HALE: Here.

SECRETARY XINIA GAMERO: And Chair

Ponte?

CHAIR JOHN PONTE: Here. Thank you.

That takes us to Item 3, which is the public forum. This is an opportunity for the public to address the Commission on items of interest to the public that are not listed on the agenda.

Because of restrictions imposed by the Brown Act, the Commission may not engage in discussion nor take action on matters not described on the agenda. Please observe the time limit of four minutes.

Ms. Gamero, is there anybody who seems to wish to speak under public comment?

SECRETARY XINIA GAMERO: Yes, Chair Ponte. It looks like we have Nancy Dervin who would like to speak at the moment.

Nancy, will -- let me unmute you here. And I believe you're able to speak now.

NANCY DERVIN: Good evening. I would like to make a request. Since this is a public meeting, would you guys be so kind as to tell us how many people are logged in to view the meeting? So even though -- I mean, we don't know who they are, but it would be nice to know how

well attended the Zoom meetings are.

CHAIR JOHN PONTE: Is that even possible, Ms. Gamero?

SECRETARY XINIA GAMERO: I am able to see the number of attendees, and I believe there's -- I'm able to disclose that information. And it should be -- it's 25 attendees at the moment.

NANCY DERVIN: Thank you very much. It would be great if we could get updated if that number changes at some point, you know, if it goes up significant by like five or more, or people drop off, just to get a sense for how much involvement from the community there is.

Thank you very much, you guys.

CHAIR JOHN PONTE: Thank you.

Ms. Gamero, is there anyone else who wishes to speak under public comment? You're on mute.

SECRETARY XINIA GAMERO: I apologize. We have Angela -- I'm sorry -- Zivkovic, and you are unmuted now.

ANGELA ZIVKOVIC: Hi, good evening. My name is Angela Zivkovic, and I'm a resident of St. Helena.

I've been reading through the Hunter Project Develop EIR, and I realize that there's a public comment period that is open until November 8th. I'm wondering if it would be possible to advertise this more broadly because I don't feel like very many people are aware of this public comment period that's open.

And I would also like to express concern about the project in general, and --

CHAIR JOHN PONTE: Ms. Zivkovic?

ANGELA ZIVKOVIC: Yeah.

CHAIR JOHN PONTE: This item actually is on the agenda. This is for --

ANGELA ZIVKOVIC: Oh, it is.

CHAIR JOHN PONTE: This is for comments on items that are not on the agenda, so I need to ask you to hold your comment until we actually get down to the item of concern.

ANGELA ZIVKOVIC: Okay. Will do.

CHAIR JOHN PONTE: Thank you very much.

Anyone else, Ms. Gamero?

SECRETARY XINIA GAMERO: Yes. We have Tracy McBride has raised her hand. And you have been unmuted, Tracy.

TRACY MCBRIDE: Hi. Good evening,

commissioners. Thank you so much.

Could you please review the process for making a public comment? I have not made a public comment in a Zoom commission meeting before. You had the instructions for the phone public comment, but I'd like the instructions for the Zoom public comment.

And then just as a -- as a side note because I don't know all of you, just for future reference, it'd be really awesome if the commissioners could put "commissioner" in front of their names, and the city employees could state their roles on their names on the screen so that I can understand your roles.

Thank you so much.

CHAIR JOHN PONTE: We'll certainly take that into advisement for the future, ma'am, but I don't think we can backtrack at the present time.

TRACY MCBRIDE: Understood.

CHAIR JOHN PONTE: Yeah. Ms. Gamero, would you please direct her to where she could pick up the Zoom link on the city agenda?

SECRETARY XINIA GAMERO: She is logged in to the Zoom meeting.

CHAIR JOHN PONTE: Okay.

SECRETARY XINIA GAMERO: I'm not sure what her question is, but during public comments, during the item -- public hearing item, which is 5.1, Chair Ponte will open up the public hearing. And just like you did now, you'll be able to raise your hand, and I'll be going down the list and calling on your name, and that's how you can provide your public comment for the specific item.

TRACY MCBRIDE: Great.

SECRETARY XINIA GAMERO: Did that answer your question?

TRACY MCBRIDE: Great. Thank you so much. Yes.

CHAIR JOHN PONTE: Is there anyone else, Ms. Gamero?

SECRETARY XINIA GAMERO: Give me one second, Chair Ponte.

CHAIR JOHN PONTE: Thank you.

SECRETARY XINIA GAMERO: I do not see anybody else raising their hand at the moment.

CHAIR JOHN PONTE: All right. That takes us to Item 4, which is consent items. Members of the Commission or the public may ask that any items be considered individually for

purposes of considering alternative action, for extended discussion, or for public comment. Unless that is done, one motion may be used to adopt all recommended actions.

We only have one item tonight. That's the minutes of October 19th, 2021. Are there any members of the Commission that wish to pull that item for further consideration?

I do not see any. Secretary Gamero, is there anyone who -- online who wishes to have that item pulled for further discussion?

SECRETARY XINIA GAMERO: I do not see any raised hands, Chair Ponte.

CHAIR JOHN PONTE: Okay. Thank you. Then a motion from the Commission will be in order, if someone cares to make one.

Commissioner Anderson. You're on mute, Autumn. You're still on mute.

COMMISSIONER AUTUMN ANDERSON: I motion to approve the minutes.

CHAIR JOHN PONTE: Okay. Do I have a second?

COMMISSIONER ROSAURA SEGURA: I second.

CHAIR JOHN PONTE: Thank you, Commissioner Segura.

Ms. Gamero, will you tally the votes, please?

SECRETARY XINIA GAMERO: Commissioner Anderson? You're on mute.

COMMISSIONER AUTUMN ANDERSON: Yes.

SECRETARY XINIA GAMERO: Commissioner Segura?

COMMISSIONER ROSAURA SEGURA: Yes.

SECRETARY XINIA GAMERO: Commissioner Rothfeld?

COMMISSIONER MARIKA ROTHFELD: Yes.

SECRETARY XINIA GAMERO: Vice Chair Hale?

VICE CHAIR DAN HALE: Yes.

SECRETARY XINIA GAMERO: And Chair Ponte?

CHAIR JOHN PONTE: Yes. Thank you.

That takes us to the public hearing for this evening, 5.1, which is receiving comments on the Draft Environmental Impact Report for the Hunter Subdivision Project.

This may take us a while to get through, but I want to make it clear that that's all we're doing. We're not acting on the Environmental tonight. We're not acting on the

subdivision tonight. We're making no recommendations to the City Council on either one of those items. All we're doing is recording and listening to the comments from the public on the Draft Environmental Impact Report.

SECRETARY XINIA GAMERO: Additionally, Chair Ponte --

CHAIR JOHN PONTE: Director DeRosa --

SECRETARY XINIA GAMERO: I apologize. There's an announcement I'd like to make.

Any comment that was e-mailed, received after 3 p.m. this afternoon, will be added to the agenda tomorrow morning, so you will not see that on the Planning Commission agenda for tonight's meeting.

CHAIR JOHN PONTE: Thank you.

Director DeRosa, do you want to introduce this for us, please?

DIRECTOR MAYA DEROSA: Certainly. Thank you. We have the City's project manner, Eric Norris, here. We'll give a brief prestation and then open it up for public comment.

So Eric, you can go ahead and take it away.

ERIC NORRIS: Thank you, Maya. I'm

going to turn my camera off here briefly, and we'll get our show going.

Mr. Chair, members of the Commission, thank you very much for being here tonight.

I'm going to give a brief PowerPoint show, just a little bit of overview about the project itself. I think the chairman has already mentioned this is not an evening at which decisions will be made or recommendations made. It's also not a meeting where we will respond to comments. Tonight's meeting is all about getting comments from the public.

So let's talk a little bit about the project. So what we're talking about is a project called the Hunter Subdivision. It's a subdivision map, a tentative subdivision map at the end of Adams and -- Adams Street and Starr Avenue. Aerial photograph here shows where it is. Hunt Avenue also provides primary access to the site. It's about a 17-acre parcel, and they're proposing a total of 87 dwelling units on that land.

This is the -- what we call the tentative map. This is the kind of map that creates single-family lots that most of our homes

sit on, or larger lots that apartments sit on.

This is a very normal part of the development process when someone is planning to build a residential project, is to first of all subdivide the land into lots, and that's what they have proposed to do here. The map shows the arrangement of lots, the locations of streets, emergency access, some parcels on which houses won't be placed but other things will happen, and so on.

So again, just really briefly, the project is just under 17 acres. They're proposing 87 dwelling units. Now that's -- we've broken that down. It's 51 single-family homes, 25 multifamily homes on one of the larger parcels, and then 11 accessory dwelling units, and those are the second units or the granny flats that typically go on a lot with a single-family home.

The general plan density is -- or the general plan land use designation for the entire property is medium density residential, and I'll show you the general plan map in a moment.

The 2019 general plan recently adopted shows this density. The 1993 general plan which

predated it also showed that same density, so they're not requesting any change in land use policy, any change in zoning.

So the zoning matches the general plan. It's MDR, medium density residential. And within that density range that the general plan requires that the site build at, there's a floor and a ceiling on that, if you will. The minimum number of units that can be built on the site is 87, which is the number that they're coming in and proposing to build. Under the general plan, the site would support about three times more units, about up to 270. But they're not proposing that. They're coming in at 87.

So this is the general plan map. The site is outlined in red. It's adjacent to agriculture, high density residential, a lot of other MDR or medium density residential land as well.

So the applications currently, one of those is the Draft Environmental Impact Report, which is currently out for public review and which is the subject of tonight's meeting, and then the native subdivision map. That's the totality of what the city will be considering

early next year when this goes into public hearings at the Planning Commission and City Council.

Now, there are future applications that will need to be filed and considered before any development can take place. If this tentative map is approved, they won't be able to build any homes yet. There are several other steps. Those are listed on here.

There's an affordable housing agreement that will need to be approved by the City Council, and that's under the City's inclusionary housing ordinance, which generally requires that any new housing project include housing which is affordable to lower income households.

There is the design review of the proposed homes. They have not submitted any detailed designs for the homes yet. Again, all they're consider -- all they're pursuing at this point is the subdivision itself.

And then finally, there's a conditional use permit which is required under the City zoning code for the multifamily housing that they're proposing on the largest of the lots, Lot Number 52 on the subdivision.

The Draft EIR looks at a variety of topics. I'm not going to read all these off on the screen, but it's everything from aesthetics to energy. Some of the more important ones are probably transportation and circulation are certainly the ones that are going to receive a lot of attention. Utilities and service systems, which includes the issue of water service -- but basically a very complete range of topics for the Environmental Impact Report.

The document also looks at alternatives to the project and a number of other topics that are required to be examined under state law.

The Draft EIR, which is lengthy -- we understand that, but it's that way in an effort to make sure that all the information is out there -- concludes that all of the project's impacts, with one exception, can be reduced to a level of less than significant.

That one impact that can't be mitigated or can't be reduced to a level of less than significant is what we call vehicle miles travelled, or VMT. VMT or vehicle miles travelled is simple a measure of how far all the cars that basically live in this subdivision will

travel on an average day, and that's everything from driving from home to work, driving from home to school, driving home to shopping and back, and so on. It's a measure of how much vehicle travel is being generated by the project.

That's a new topic, actually, for CEQA that was imposed by state law just recently. What the state is trying to do is encourage cities to reduce the amount of vehicle travel as part of overall reductions in greenhouse gas emissions, which come partly from vehicles driving on the roadways.

But that's the one impact that can't be reduced to a less-than-significant level, and that is identified as significant, unavoidable.

Now, that doesn't mean that the EIR recommends adopting the project or approving it or not. The EIR doesn't do that. The EIR does not recommend anything about the project. It simply provides information. And in this case, it has identified that there's a significant impact, and there are methods provided in state law for the city to take action on a project even if it has significant impacts.

A little bit of history about the

project. Going back to 2010 was when the first application for this project came into the city. It was accepted as complete in 2011, so it's been around for a while. An earlier CEQA process started soon after that going between about 2011 and 2016. For various reasons, it was not completed.

This current process began about four years ago in 2017, which brings us up to September 23rd of this year, which was when the Draft Environmental Impact Report was released for public review for a minimum 45-day review period as required by state law. We're actually extending that because 45 days would've ended on a weekend, so we're extending that to the 8th of November.

Looking forward to next steps, once the comment period on the EIR closes on November the 8th, we will look at all those comments with the City's environmental consultant. If you're looking at your screen, you'll see someone named Christine Kronenberg. Christine is with the firm of Dudek. They are also working, as I am, for the City and on behalf of the City. They wrote the EIR, and they will be writing responses to

the comments that come in.

So that whole process of reviewing those comments, responding to them, and preparing a final EIR for consideration is going to happen through the winter. And then we're looking at the first quarter of next year for public hearings on the EIR and the tentative map.

Then, as I mentioned, there are future entitlements which can either happen next year or later. It's really up to the applicant on when they want to bring those in. Assuming that the subdivision map is approved, those being the affordable housing agreement, which goes to the City Council; the design review of the proposed homes; and the conditional use permit for multifamily housing, both of which would come back to this planning commission for approval.

So there are many opportunities throughout this entire process for public input, as we're showing on the screen here. The comment period that we're currently in is one of those, and this meeting is certainly an important part of that.

In addition to this, I mentioned there will be hearings next year, early in the year, in

the first quarter. Those will all be open to the public, and you'll be able to again come in front of the Planning Commission or the City Council, and express your concerns, ask questions, make comments about the project.

So once again, for tonight's meeting, we're trying to focus attention on comments on the Draft EIR. What we're looking for are your comments, your concerns that affect the adequacy of the environmental document that we're looking at tonight. Is there any information that's missing? Is there analysis that's not correct? Is there conclusions that you feel are incorrect? Are there typos in the document? We're looking for anything that -- any kind of comments like that.

So as the Chair mentioned, we're not looking tonight for comments on the project itself. There will be hearings at which time that is going to be a more appropriate topic of discussion.

I'll also mention that there are a number of different ways to comment. Well, first of all, the EIR is available on the City's website. I've put the web address up here. It's

also available, if you don't want to go online, in printed form at City Hall and at the St. Helena Public Library. The comment deadline is November 8th.

You can comment tonight. We certainly encourage you, if you have the ability to, to comment in writing either by U.S. mail or via e-mail. That way, we're sure that we get your exact comments in the record. We'll be taking notes tonight. As I mentioned, Ms. Kronenberg from Dudek is online, so she'll be just taking notes about the meeting tonight. But if you really want to be certain that your full comments exactly as you want to express them are in the record, we encourage you to do that in writing.

So Mr. Chair, staff's recommendation for tonight is that you finish receiving this presentation, open the public hearing, receive comments, close the public hearing, and then if there are any commissioner comments on the Draft EIR, we'd certainly welcome the commission members to provide those.

And with that, I will end my presentation, turn my camera back on, and again, thank you for the time.

CHAIR JOHN PONTE: Thank you very much, Mr. Norris.

With that, I will indeed open the public hearing. And this is actually -- right as we get started is the time for any commissioner who's had ex parte communications to place that on the table so we all know about it. Are there any commissioners who've had ex parte communications over this particular subject?

I see no hands going up, so Secretary Gamero, are there any members of the public who wish to speak on this item?

SECRETARY XINIA GAMERO: Yes. We have some hands, and I will start off with Angela Zivkovic. You are unmuted, Angela.

ANGELA ZIVKOVIC: Okay. Can you hear me all right?

SECRETARY XINIA GAMERO: Yes.

ANGELA ZIVKOVIC: Great. Thank you.

So I've read through the Draft Environmental Impact Report, and I'm surprised that so many of the issues that were covered were deemed as mitigated to a level of less than significant. I feel that there are quite a few issues that would, in fact, have significant

PC-1

impact, and I will go through the list as I see it.

I strongly support Alternative Number 1, which is no project, no build alternative for the following reasons.

One, the aesthetics of the east side of the town are inextricably linked with the vineyards, wetlands, and public outdoor space in the designated project area. Every day, hundreds of St. Helena residents access the areas around the site -- this site for recreation, as do visitors and tourists to the area.

If there were a large housing development erected on the site, it would irreversibly damage the aesthetics of this town as a small agricultural town with historic significance. We would not be able to walk on the walkway through the area, have a view of the hills on either side of the valley and the natural habitat restoration area.

The housing development would also permanently alter the aesthetics of Starr Avenue by drastically increasing traffic and congestion in this area.

As a direct result of the building work

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itself and the subsequent increase in traffic and congestion to and from the development by hundreds of new residents, there would also be significant impact on the air quality, particularly when you look at it as microclimate on the east side of town, and to all of the current residents as well as wildlife that live in the protected wildlife habitat zone directly adjacent to the development.

The impacts on air quality from hundreds of additional vehicles driving to and from these residences and from the extension of Starr Avenue and Adams with the additional cutting over of vehicles from Main Street and Silverado Trail would have additional significant and cumulative negative impact on air quality.

The impacts of the development on water quality and hydrology have also not been adequately evaluated and mitigated in this report. The idea, it seems, is to simply use an agricultural well to supply the water needs of hundreds of residents, and I feel that this is naïve and inequality addressed.

We're living in a time of unprecedented water shortages with climate change projections

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predicting worsening in this regard over the next several decades. And with clear evidence that wells and underground water sources are simply running out all over California, it is completely irresponsible to propose that the water needs of potentially over 500 residents in this development could possibly be met with an agricultural well as the water source.

Next, with regard to land use, it is remarkable that the development in question does not take into account the fact that there is hardly any public open space available in town as it is, much less if the project were to go through.

Even chickens in the state of California have humane standards on the amount of minimum access to open space that they can have at about 60 square feet of space. At an equivalence of approximately 30 times body size for an average human, that would mean that every citizen of this community should have the right to a minimum of 1,800 square feet of open space.

Currently, the City of St. Helena has only a couple of parks, adding up to about 3 million square feet of open space. And with over

PC-10 Cont.

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PC-13

6,000 residents, that means that each St. Helena resident has only about 500 square feet of open space, which is already less than the bare minimum requirement that even poultry has access to. We really can't afford to lose the last bit of open space that we have in this area.

Noise and vibration would also increase significantly with the development in the area, and this has not been adequately accounted for with regard to the residents of not just Starr Avenue and the adjacent neighborhoods but also the existing low-income housing development on Hunt Avenue, which would be severely impacted not just during construction but also once the development is finished, and there is significant traffic and congestion that's increasing in the area.

Finally, it's difficult to fathom how the development project could possibly fit in with the goals and aspirations of our community for public services, recreation, and public utilities. As it is, our community is barely able to meet the needs of current residents with regard to basic public services, recreation, and utilities.

PC-13 Cont.

PC-14

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Everything from schools, water, sewage, garbage would be severely impacted by a construction project that would increase the population of St. Helena by 10 percent practically overnight. PC-17

It is difficult to understand how our schools could possibly continue to provide quality teaching to a student body that could grow by 10 percent from one year to the next. PC-18

And our current water and sewage treatment facilities are in need of repair and maintenance, and are barely able to supply the basic needs of current residents. A sustainable amount of -- PC-19

SECRETARY XINIA GAMERO: Ms. Angela Zivkovic, just a reminder that there's a time limit of four minutes per public comment. Your four minutes are up. If you'd like to wrap up your public comments, now would be a good time.

ANGELA ZIVKOVIC: Okay. I would like to just finish by saying that I think a major problem is sewage and water. The plan states that the sewage would simply by diverted to existing sewer lines on Starr Avenue and Vineyard Valley, and there's already some issues there. PC-20

We have a bad smell on the corner of Starr and Hunt in the fall on a regular basis, and we feel that this would be even more severely impacted by the development.

Thank you so much for giving me this opportunity to voice my opinion.

CHAIR JOHN PONTE: Thank you.

Ms. Gamero, is there a next person?

And I would like to remind everybody there is indeed a time limit of four minutes. We're trying to stick to that.

SECRETARY XINIA GAMERO: Yes. Chair Ponte, there is Greg Reynolds from Vineyard Valley who'd like to speak.

And Greg, you're more than welcome to speak now.

CHAIR JOHN PONTE: Mr. Reynolds, welcome.

GREG REYNOLDS: Thank you. Can you guys hear me?

CHAIR JOHN PONTE: Yes, we can.

GREG REYNOLDS: Okay. Good evening, I'm Greg Reynolds, 290 Pope Street, St. Helena. I'm the managing partner for Vineyard Valley Mobile Home Park. Thank you once again for an

PC-20 Cont.

opportunity to speak.

There is myriad of concerns we have about the Hunter Project. As our residents understand more about the project, topics of impact are significant and across the board. From levee access and levee maintenance to vista and privacy concerns, the electorate here in VV is not happy. PC-21

There are so many mitigating circumstances raised in today's current environment around water, fire safety, emergency response, traffic, to name a few, that your job as city planners and perhaps City Council members make it all the more critical that evidence doesn't get ignored. You have a tough job. You need to forecast where a project like this takes the citizens of Vineyard Valley and the greater city of St. Helena. PC-22

I'll focus on just three issues tonight, and we will follow up in writing next week as well.

My three issues are emergency evacuations; water, specific to sewer discharge; and traffic.

Vineyard Valley is a retirement

community 55 and older, approximately 218 homes when everyone is home. The park is home to 350 people. Many are retired seniors.

After the last five years and last year with the Glass fire, we've spent more time each year focused on fire suppression, readiness, and safety, this year primarily in neighborhood reach and resident evacuation in the event of an emergency.

After the devastating floods of '86 and '95, the park was transformed with a significant investment in the floodwall project. The design and building of that project attempted to mitigate the floodplain realities with the floodwall, the levee, and holding pond, and pumps.

The deployment of that significant investment did not include the construction referenced here. Hunter Project was not part of that plan and the safety they propose to deliver. We're very concerned that a safe evacuation and access through the back of the park will disappear with this project. We are concerned that the construction will undermine the levee and overwhelm the Army Corps strategy put in

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place to protect our 350 residents and their homes.

We are concerned about water, as many have commented. As we all engage to participate in Phase 2, this concerns us greatly. We will comment in writing specifically about wastewater flows and what appears to be a plan to connect a portion of the Hunter Project to Vineyard Valley's wastewater discharge sewer. This is a city sewer that is documented to have significant issues when it does rain.

The majority of the Hunter Project single-family homes, 46 out of 51, will be connected to the VV sewer, Vineyard Valley sewer. We will be getting most of the sewer flow, taking into account the multifamily units as well as 75 percent of the total project discharge is directed our way. Our VV sewer is already overtaxed. This will clearly drown this infrastructure. As in other parts of the city, this is unacceptable and expensive, as the City spends and documents every cleanup situation.

The traffic data clearly demonstrates significant challenges for our senior contingent. In the DEIR, it is clear from the table, the

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proposed project transportation demand management, TDM, strategies would result in a project VMT to be 15.2 percent higher than the citywide VMT per capita.

The Draft EIR concludes and clearly states the proposal project has a significant and unavoidable impact. Then it is our opinion that the Council has an obligation to the citizens of St. Helena to protect their environment, environmental integrity, and vote to deny the acceptance of the Draft EIR.

Thank you so much.

CHAIR JOHN PONTE: Thank you very much, Mr. Reynolds.

Secretary Gamero, please.

SECRETARY XINIA GAMERO: Yes. One moment. We have Maria. Maria, you should be unmuted now. You can speak now.

MARIA VILLEGAS: Hi. Good evening, everyone, and thank you for taking my comment.

CHAIR JOHN PONTE: Good evening, ma'am. If you could give us your full name. You don't have to, but we would appreciate it.

MARIA VILLEGAS: Yes. This is Maria Villegas. I'm at 1166 Meadowcreek Circle.

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CHAIR JOHN PONTE: Thank you very much.

MARIA VILLEGAS: Sure. Well, on the surface for some, the proposed project appears to be advantageous to the community, but is it?

Though the project will increase the number of homes, including affordable housing, additional residents will increase the need for an electrical grid that can supply power for our extreme hot and cold seasons. PC-29

The Draft EIR states the (indiscernible) uses the 2016 state requirements. However, it is compliant with the updated 2019 version. There are increased power outages with our current population. Adding a new subdivision would stress an already struggling power system. PC-30

I was not able to find added evacuation routes in the event of a fire or flood. This leaves Adams and Starr as the only evacuation routes for the additional 87 units. The two streets would also be the evacuation routes for residents on Starr, Meadowcreek, Hunt, and spillover from Vineyard Valley. PC-31

As years have gone by, parked vehicles from surrounding neighborhoods have significantly increased on Hunt, Starr, and Meadowcreek. With PC-32

the current extreme fire danger and longer fire seasons, in the event of an emergency, evacuations will create a dangerous and potentially deadly situation.

If residents in surrounding neighborhoods are forced to park farther away from their homes, this would increase foot traffic and vehicle traffic during an emergency evacuation. As we all know, people panic, and the situation could become deadly. The Hunter Project would greatly impact -- increase traffic and a deadly situation more likely.

I was born and raised in St. Helena and have seen it grow from a sleepy town to a popular tourist destination. As a child, I remember residents never wanting to live on the east side of town, not because it was the wrong side of the tracks but because it flooded, and it was agricultural.

There were (indiscernible) trees and walnut trees, and yes, there were two wineries. It was (indiscernible) and Berringer.

And the early -- if the early settlers were standing before you today with the current proposed project, they would ask you, "Why would

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you build in a flood zone?" And though there is currently a levee to project the proposed development, the elders would say, "Respect Mother Nature." When she decides to flood, there's no levee that would -- that's going to stop flooding. We need to respect nature and listen to what it's telling us. If the recent fires haven't taught us, we really need to reevaluate our understanding of climate change.

This isn't rocket science. This is common sense. When a proposed project is being built in an area never meant for human habitat, it screams, "This proposed project should not move forward."

Lastly, the willingness to build a subdivision over a Native American burial site, the largest discovered in the Napa Valley, should give pause not only to the developer but all our elected officials. The site qualifies for both national and state registry as a historical site. 163 human remains were discovered along with trading beads believed to be from Spain. The DEIR recognized there is potential for more artifacts to be uncovered.

And under AB 52, the Native American

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tribe affiliated with the artifacts and/or human remains are to be notified. The Wappo tribal chairman was not listed in the DEIR as being notified. The artifacts discovered at the project site are part of St. Helena's history. It's part of us.

Thank you.

CHAIR JOHN PONTE: Thank you very much.

Ms. Gamero?

SECRETARY XINIA GAMERO: Yes. We have Patrick Band. Patrick, you should be able to speak now.

PATRICK BAND: Thank you very much.

Patrick Band, executive director of the Napa County Bicycle Coalition. I wanted to provide some general comments this evening in advance of a formal comment letter that we'll be submitting within the next week.

We would also like to request an extension of the EIR -- or DEIR comment deadline by an additional 30 to 45 days given the number of significant issues that we've identified as well as other community members are bringing up this evening.

Specific to the Bicycle Coalition, we

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have pretty significant concerns regarding a lack of adequacy of the bicycle and pedestrian facilities that are proposed within this project.

Despite, as the consultant has referenced, the significant and unavoidable impacts primarily from VMT as a result of project buildout, notably the DEIR fails to acknowledge the city's own 2019 adopted bicycle plan, which would call for Class 1 multiuse facilities on Adams as well as Starr. Those facilities would provide a safe, separated opportunity for bicyclists and pedestrians to travel to and from the project location to a number of local destinations, including grocery stores, shopping, schools nearby, and that connectivity would only be leveraged further by the planned improvements for the Napa Valley Vine Trail, which is also likely to include a section of Adams.

Again, this project is very walkable and bikeable if those project facilities are included, which they are not currently.

We again will be providing a full comment letter, but suffice to say we are very disappointed that the DEIR is basing a number of their transportation assumptions on either

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outdated or faulty plans and would like to request an extension of the comment period by an additional 30 to 45 days.

Thank you very much.

CHAIR JOHN PONTE: Thank you.

I would like to say one thing here right now. The Commission is not empowered to make any sort of decision on extending the review time for this EIR. That's beyond our purview. That would come out of either senior City staff or the City Council itself. We have no power to do that. So if there's anyone else who is online waiting to request that, we are not the venue that can act on any such request.

Ms. Gamero, is there another person who wishes to speak?

SECRETARY XINIA GAMERO: Yes. We have Tracy McBride who would like to speak. And you have four minutes, Tracy.

TRACY MCBRIDE: Good evening, commissioners and staff. Thank you to those who have spoken, and thank you for this opportunity.

I want to say that I feel this is a design of the past, and I'm not quite understanding the City staff person who said

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PC-43

tonight is about comments on the EIR but not on the project.

I do support more housing, more diversity in St. Helena, and property owner rights. But I strongly feel the proposal for 87 units needs to take into consideration energy efficiency, housing equity, working to achieve net zero impact on the environment, and resource consumption.

Constructing separate and unequal load to moderate-income housing will forever mark those units as affordable units, lesser quality, and be easily identified as the low-income section. The affordable housing should look and feel very similar to all the homes developed. I can accept they may be smaller and have smaller yards, but why do they need to look different?

I have an issue with the east side versus the west side of St. Helena. There are no similar big developments in the heart of the so-called west side or perimeter of the west side. You commissioners need to tip the scales to help the developers build homes that attract the next generation of residents to even the score between the east side and the west side.

PC-43 Cont.

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I believe there should be public open space, mentioned in the EIR, of at least one acre. As commissioners, you know our per capita per public parks, and where do we stand? Just as the Signorelli development created Jacob Miely Park, which is much bigger than an acre, don't you feel creating public open space is the right thing to do for our community and the new residents who will live here? I believe this park should connect to a walking path to the Napa River. PC-46

This proposal should allow for owned, affordable housing, which should be regulated in the same way but not a rental. The affordable housing in St. Helena is only rentals. This eliminates home ownership, a very important component of our society. Owners will not be able to achieve the same appreciation as the free market, but they will be able to enjoy home ownership benefits. My opinion, at least 50 percent of the moderate and below-income housing should be owned. There are Bay Area cities that implement owned affordable housing. PC-47

The new construction should be fire retardant with underground utilities, even if PC-48

it's not in a high fire natural hazard zone. Anyone who's lived next to a fire knows it can sweep through any neighborhood. Has the City considered requesting the project be 100 percent electric, no natural gas for both environmental and fire hazard reasons?

This project absolutely has an impact on an evacuation plan with possibly hundreds more cars needing to evacuate. We absolutely need another connection to the Silverado Trail, other than Deer Park, the historic Pratt, or Pope bridges. Our stone bridges are not seismically sound. It's time to wake up to what we need to do for efficient, safe traffic flow. We are living on borrowed time with the old bridges, and we need to alleviate the weight of traffic on Hunt and Pope.

Then we get to the clincher. Would the proposed project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal dry and multiple dry years? "This is a less-than-significant impact." Come on. Really? Retrofitting toilets is something that was done 20 to 40 years ago. This will not make the

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project water neutral. The only thing that will make this project water neutral is investment in infrastructure to get more water for the whole city. The City can ask or incentivize the developer to do this.

In summary, I support development and property owner rights, but I do not support taking a step backwards to gain not enough. I'm talking about housing equity, forward thinking, balance east side and west side, build a new bridge, water, water, water, and I also think that the EIR comment period should be extended, and I'm making this comment out loud to the City staff.

Thank you so much.

CHAIR JOHN PONTE: Thank you.

Ms. Gamora?

SECRETARY XINIA GAMERO: Next we have Ms. Elizabeth Alderman. You can speak now.

ELIZABETH ALDERMAN: Hi. Hello. I guess in contrast to several people who have spoken tonight, we are actually very new to town. We moved here in February, and we are probably the most impacted by the potential construction, living at the corner of Hunt and Starr.

PC-51 Cont.

PC-52

There's a few things I would like to say. We have two small children who ride the bus every morning. We stand out, you know, at the corner of Hunt and Starr, and every single morning, I have to stand in the crosswalk of Hunt and Starr to prevent cars from driving past the bus and putting children in peril. The stop sign at our intersection is faded almost to not being recognizable. It has not been replaced. PC-53

So I think, you know, to sum up, I have no confidence that there is the ability to safely manage a new inflow of hundreds of cars for the children that ride that bus every single day. PC-54

The other thing I'd like to point out is there is a major parking issue in our neighborhood. I have been in contact with the manager of Hunt's Grove. My children are friends with kids in the community. You know, we live right next to them.

Those apartments right now have many more people living in them because of the affordable housing crisis, and it's trickling over into a parking situation. PC-55

What I have not seen is any plan from the City to accommodate the existing traffic PC-56

problems and parking problems we have right now as well as what we will do when there is an additional 80 units of housing.

I would also like to point out that from an equity perspective, I would much rather see another Hunt's Grove in the community where we give affordable housing to people who truly need it and who truly want to contribute and work in the community rather than potentially opening up multiple units of housing to second home owners who do not live here. There are too many people that need housing in this community to make that even a possible option that these would turn into Picasso homes or anything like that.

And echoing what other commenters have said, there's not enough time to react to this Environmental Impact Review. I know for a fact that many people in the Hunt's Grove community have not read it, and they are majorly impacted by this development, so I would like to also echo the sentiment as well.

CHAIR JOHN PONTE: Thank you, Ms. Alderman.

SECRETARY XINIA GAMERO: Yes, we have Nancy Dervin who would like to speak. You can

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speak now.

NANCY DERVIN: Good evening again. Ditto to all the other speakers' concerns. I really thought a lot about this, and I don't know how it would be physically possible to undertake that type of a development in that particular location without serious degradation to the flora and fauna in the area. PC-59

It's adjacent to a conservation easement, agricultural lands, and publicly accessed property that the City owns, and I just don't see how you could go in there and do that kind of construction without devastating the habitat of wildlife, and plants, and shrubs, and other things that are trying to thrive and that we've been working towards trying to bring back, actually. PC-60

So there's an environmental effort underway now to try and restore habitat and preserve, and even enhance it, and this kind of a project just simply is not compatible. PC-61

And beyond the plants and animals and whatnot, I think as a society, if we don't take seriously what sacred ground actually means and honor it, we're going down a path that even if

fiscally a project is successful, there are other ramifications that aren't measured by dollars that are going to be very detrimental to our community, to the psyche of our community. So I think we need sometimes to think behind just the hard numbers, and the calculations, and whatnot.

And then lastly, I'd like to remind you guys -- I think you all know this, but possibly you don't -- that St. Helena Housing Coalition and our town, St. Helena, have some significant affordable housing projects that they're trying to bring forward. And at some point, if we're not already there, there just isn't enough water.

We're struggling with water now. We have hundreds of affordable housing units the government has asked us to provide. We have two nonprofit agencies working to that end. I think the priority should be for the developments to address mandated needs that are not just mandated but are demonstrated to us every single day with literally thousands of people commuting to jobs, many of them service workers or even City employees that cannot afford to live here.

So I don't even know if in this process it's possible for you guys to look at the bigger

PC-62

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picture and recognize at some point, we will have built out all that we can give our resources, and I don't think it's appropriate to bypass the affordable efforts that are being made in favor of something like this that would just be so irrevocably harmful on so many different levels.

Thank you for giving the opportunity to speak. I appreciate it. Goodnight.

CHAIR JOHN PONTE: Thank you, Ms. Dervin.

SECRETARY XINIA GAMERO: And at the moment, I do not see any more hands raised. I'll give it a few seconds to see if anybody raises their hand.

We have Marina Lava -- I'm sorry -- Lavagnino. I apologize if I messed that up. You can speak now.

MARINA LAVAGNINO: Great. Thank you. You did very well with that. Lavagnino. Marina Lavagnino.

I'm curious. I actually live in Vineyard Valley and look out on the side of this every day. My office looks out on the property, and I see so many people using this as a recreation area.

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I am going through the DEIR carefully, and there's a lot of really interesting information there, so I would encourage people to read it carefully and not just briefly because there's a lot of detail.

But I'm wondering if there has been any survey of the people who use this -- the walking trail because they don't just stick to the (indiscernible). They do a loop around the property, and depending on the time of day and the fog in the area, or the sunshine, people use this area in many different ways. And it's certainly not just the Vineyard Valley residents or the people from Hunt's Grove.

I'd be curious -- and I think it's very relevant -- if there could be a survey of who uses the property and how fully. It would definitely be very different if they were walking along a set of homes rather than between a vineyard and field.

I think there's a recreational usage that people are experiencing right now that if we lose that, we don't have another place in St. Helena that provides that kind of access and usage. So I don't -- I know you can't answer

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this right now, but I think that that kind of survey would be really important.

Thank you.

CHAIR JOHN PONTE: Thank you very much.

SECRETARY XINIA GAMERO: Next, we have Ben Alderman. Go ahead, Ben.

BEN ALDERMAN: Oh, hi. Can you hear me okay?

CHAIR JOHN PONTE: Yes, we can, Mr. Alderman.

BEN ALDERMAN: Thank you. I was just wondering, taking into account recent weather events, the closing of throughways and how that's going to have an impact that we've seen already on the main streets. Once Starr is connected, that would then likely drive a lot of that traffic down Starr and over.

So when we're looking at traffic patterns, is there the opportunity to look at traffic patterns now? I don't remember the exact day -- I'm sorry -- the traffic patterns were taken, so we can look at the impact of the closing of Silverado Trail and what the likely impact to that would be on the thoroughfare through Starr. Because as we know, this

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development has no access to Silverado from either side, if there was a closure. So all of that is then likely to be driven down not the main street but along Starr.

We know traffic is already an issue as part of the Environmental Impact Study. Recent events suggest to me it would actually be a much greater issue than what's been put into the study so far.

CHAIR JOHN PONTE: Thank you, Mr. Alderman.

Ms. Gamero?

SECRETARY XINIA GAMERO: I do not see any other hands raised at the moment, Chair Ponte.

CHAIR JOHN PONTE: All right. Well, let's close the public hearing for now, and we will check before we go on. But at this point, this would be the opportunity for planning commissioners to comment on the draft EIR if there are any comments from the Planning Commission. Any commissioner who wishes to throw their oar in the water on this subject this evening?

I do not see any hands, but I will

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remind -- oh. Vice Chair Hale, please.

VICE CHAIR DAN HALE: Yeah. I'm going to try to not get too deep in the weeds on my comments, but I would just encourage everybody out there to take the available time and the time it's going to take, actually, to read through some of this because there is a -- there's a mountain of data that's in this.

And I think what I would suggest that it's important to understand is what we're trying -- the comment process here about the EIR, the Draft EIR, is -- what we're trying to form is a more perfect tool to analyze this project. It's, I think, keeping your comments relevant to that -- to perfecting that tool will be really, really most useful.

And it's -- know it's a little -- it's dense, and it's difficult to kind of parse out the different pieces of this and the process of it. but I think if we can do that, this will be more productive, and it'll give us the most accurate kind of read on this, so I think if you can kind of push to perfect the data, you know, point out where pieces are missing, and if there's pieces that you feel are inaccurate, of

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course do that too. That would be the most productive thing. And I'll leave it there.

CHAIR JOHN PONTE: Any other commissioner care to comment on the Draft EIR at this point?

I do not see any hands raised. So with that, Ms. Gamero, has anyone come online the last couple of minutes?

SECRETARY XINIA GAMERO: I do not see any other hands raised, Chair Ponte.

CHAIR JOHN PONTE: Okay. In which case, I will --

ERIC NORRIS: Mr. Chair?

CHAIR JOHN PONTE: Yes, sir. Mr. Norris.

ERIC NORRIS: Perhaps the clerk could just mention the number of participants who are on the call at this time. It has gone up.

CHAIR JOHN PONTE: You're correct.

SECRETARY XINIA GAMERO: The number of participants is 32.

CHAIR JOHN PONTE: 32. Okay. We were at 25.

SECRETARY XINIA GAMERO: And I do see a hand that just raised.

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CHAIR JOHN PONTE: Okay. Could you --

SECRETARY XINIA GAMERO: We have Mr. Hussong who would like to speak. Go ahead.

RANDY HUSSONG: That's correct. Great pronunciation, my last name. Thank you very much. Hunt Avenue resident.

I'm concerned about the water. I mean, everything else is going to be parsed out and mitigated. Traffic and so forth is going to be heavily impacted.

I can -- I read through the entire report. I cannot understand how retrofitting some toilets is going to make the water usage neutral, along with the sewer. We've got some serious, serious problems with the water in Bell Canyon. We're not doing anything to increase that to an adequate amount, and I beg any person in the town of St. Helena to say that 65 gallons a day, or a two-minute shower, is the luxury that you expect for the tax base that we're paying for.

So this is a significant impact, the water usage, that is not being addressed in the EIR. And I beg to differ that the -- it is not an impact and that the well is going to produce

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some portion of all the landscaping and that retrofitting 300 toilets is going to make this a water neutral situation when you can't provide enough water for the residents that are already paying for it. It's absurd.

So this needs to be addressed in a more significant way and more detailed. So thank you very much.

CHAIR JOHN PONTE: Thank you, Mr. Hussong.

SECRETARY XINIA GAMERO: We have Michael Mills next. You can speak now, Mr. Mills.

MICHAEL MILLS: Thank you. Commissioner Hale has pointed out that this document is -- I think his words were -- dense. And it seems to have encouraged us all to read it carefully.

And there was a request earlier from two people that the comment period, which is remarkably brief -- I think, per page, it's a really very minimal comment period. There was a suggestion that the comment period be extended. The Chair has said that the commission does not have the power to do that but suggested that the

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staff has that power. Is that correct?

CHAIR JOHN PONTE: Not -- well, certain members of City staff have that power. But basically, it falls to the City Council to do so or to certain members of upper management of the City acting in their place.

MICHAEL MILLS: Then, Mr. Chairman, I would suggest that you identify specifically how we can submit that request. I think that would be fair to those who've made the request, that you give us the direction on how to do that.

CHAIR JOHN PONTE: You have made the request now. We just can't act on it. It's beyond our purview to act on it.

MICHAEL MILLS: Well, is the Commission then transmitting that request to the appropriate authorities on behalf of those who have asked?

CHAIR JOHN PONTE: We will be transmitting that request indeed.

MICHAEL MILLS: Thank you.

CHAIR JOHN PONTE: Anything else, Mr. Mills?

MICHAEL MILLS: No. Thank you very much.

CHAIR JOHN PONTE: Very good. Thank

PC-71 Cont.

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PC-73

you.

SECRETARY XINIA GAMERO: Next, we have -- excuse me -- Maureen 436. Maureen, if you could state your last name. You don't have to, but it would be great if you could do that for the record. You can speak now.

MAUREEN LEVANDOWSKI: Hi. I'm Maureen Levandowski. I live off of Fawn Park here in St. Helena, and I just feel like the most important thing of this whole scenario is definitely the water. I would have to agree with Randy Hussong that that is probably the biggest issue here. We are living in a time when there is an unprecedented amount of no water, and we need to be addressing that more than anything in this whole project.

And that's pretty much it. Thank you.

CHAIR JOHN PONTE: Thank you.

There are no other hands up at the moment, Chair Ponte.

CHAIR JOHN PONTE: No hands the moment. All right.

DIRECTOR MAYA DEROSA: Chair Ponte, if I may --

CHAIR JOHN PONTE: Yes.

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DIRECTOR MAYA DEROSA: -- respond and articulate for our public what the -- again, I know we spoke a little bit about what the process looks like going forward, and I did hear the request to extend the comment period.

The -- what I want the public to understand is that while the formal comment period on the EIR closes on the 8th so staff can prepared detailed responses through the final EIR, there actually will still remain an open period to still comment on the project and the EIR all the way up into the final hearing going to the City Council, which is still months away.

So -- and we had done a news release about this. So how we would endeavor to respond to those comments would be through the staff report at those respective public hearings.

So I want to, you know, not have a sense of alarm that just because they don't get their comments in by the 8th that they're going to be dismissed. That is not the intent at all.

CEQA is a public process. The purpose of the EIR is just to disclose what are the impacts, and there are statutory timeframes along that process of where we receive additional input

and feedback.

So I hope that helps clarify to the public that they're -- they are still welcome to submit comments on the EIR post the 8th, but there's just going to be -- it's just going to be a slightly different process of what it looks like of how those comments are addressed.

Thank you.

CHAIR JOHN PONTE: Thank you, Director DeRosa.

All right. Ms. Gamero, one last time, anybody who wishes to speak?

SECRETARY XINIA GAMERO: No additional hands are up, Chair Ponte.

CHAIR JOHN PONTE: All right. I'm going to, in which case, close the public hearing. And since we've already requested comments from the planning commissioners, unless there's anyone else on the Planning Commission who wishes to address this item -- I don't see any hands -- we will move on, which takes us to Item 6, new business. We have none.

Item 7, schedule matters. We have none.

Item 8, department reports. Director

DeRosa, do you have anything for us tonight?

DIRECTOR MAYA DEROSA: No formal report, but just to let you know that our next meeting will be cancelled in November, but we are looking to have a meeting, the first meeting in December on the 7th. So that would be our next scheduled meeting.

CHAIR JOHN PONTE: Thank you.

Agenda forecast, as always, it's on the City website, the list of current projects that are in process.

And this is also the opportunity for any commissioner to request an item on a future agenda. Is there any commissioner who'd like to bring an item forward for discussion or consideration on a future agenda?

Once again, seeing none, that brings us to what was (indiscernible) favorite item, adjournment.

We are adjourned. Thank you.

C E R T I F I C A T I O N

I, Sonya Ledanski Hyde, certify that the foregoing transcript is a true and accurate record of the proceedings.

Date: December 1, 2021

Sonya Ledanski Hyde

Responses to Planning Commission Meeting Commenters
November 2, 2021

PC-1 The comment states an opinion that many issues areas dismissed in the Draft EIR that would cause a significant environmental impact.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-2 The comment is in support of the No Project Alternative because the Project would irreversibly damage the aesthetics of the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-3 The comment asserts that residents would not be able to walk through the Project area to view the natural habitat restoration area and hills on either side of the valley.

The Project site is not publicly-owned and is therefore not a public open space. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-4 The comment states an opinion that the Project would alter the aesthetics of Starr Avenue by increasing traffic congestion.

The aesthetics due to an increase in traffic is not an issue evaluated because traffic is always changing and does not constitute a permanent physical change. The comment is noted and forwarded to the decision makers for their consideration.

PC-5 The commenter states an opinion that the increase in traffic generated by the Project would significantly impact air quality and surrounding areas including existing residents as well as wildlife.

Please see Response to Comment 61-2 regarding air quality concerns and Response to Comment 14-2 regarding wildlife.

PC-6 The comment states an opinion that the Project would impact the wildlife in the protected wildlife habitat zone adjacent to the Project site.

It is not clear from the commenter what habitat zone is adjacent to the Project site. The City has not identified the presence of any habitat zone. The comment does not

identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-7 The commenter states an opinion that the increase in vehicular traffic due to the Project would result in a significant impact to air quality.

Please see Response to Comment PC-5 that addresses this concern.

PC-8 The comment states an opinion that the Draft EIR does not adequately evaluate and mitigate water quality and hydrology impacts.

Please see Master Response 2 and the Response to Comments for Letter 32.

PC-9 The comment states an opinion that the idea to use an agricultural well to supply water to Project residents is naïve and inadequately addressed in the Draft EIR.

Please see Master Response 2 and Responses to Comments 88-2 and 88-3.

PC-10 The comment asserts that climate change is limiting water supply and that it is irresponsible to propose that 500 new residents be served by an agricultural well.

As stated in Chapter 2 of the Draft EIR, the Project is estimated to result in the addition of 213 new residents to the City and the City would provide water to serve future residents. The onsite well would only be used to provide water for irrigation. Please see Master Response 2 regarding water supply.

PC-11 The comment states an opinion that the Project does not consider the limited amount of public open space available in the City.

Public recreational spaces are discussed in Section 3.12 of the Draft EIR. Additionally, the Project site is not publicly-owned and is therefore not a public open space The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-12 The comment states an opinion that based on the minimum open space access requirement of 60 square feet for chickens in California, City residents should have a right to at least 1,800 square feet of open space.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-13 The comment states an opinion that each resident of the City only has access to about 500 square feet of open space which is less than the equivalent minimum requirement for chickens.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-14 The comment asserts that noise and vibration impacts to adjacent residents and the existing low-income housing development on Hunt Avenue have not been adequately addressed.

Noise and vibration impacts are discussed in Section 3.11 of the Draft EIR. See also Response to Comment 38-1. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-15 The comment asserts that the Project would increase traffic congestion in the area.

The Project's impact on transportation and circulation is addressed in Section 3.14, Transportation and Circulation. The analysis includes consideration of motorized vehicle traffic impacts on roadway capacity, vehicle-miles travelled (VMT), and potential impacts to transit, bicycle, and pedestrians. See also Responses to Comments 10-2 and 36-2. The comment does not identify any specific areas where the Draft analysis is inadequate; therefore, no further response is required.

PC-16 The comment asserts that the City already has difficulty serving current residents with regard to public services, recreation, and utilities.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Impacts to public services, recreation, and public utilities are discussed in Section 3.12 and Section 3.13 of the Draft EIR. Please see also Response to Comment 97-1 for additional information.

PC-17 The comment states an opinion that the Project would severely impact schools, water supply, sewer capacity, and garbage services.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decisionmakers for their consideration. Please see also Response to Comment 121-29.

PC-18 The comment asserts that local public schools would be unable to provide quality education to a growing student body.

Please see Response to Comment 108-6.

PC-19 The comment asserts that current water and sewage treatment facilities are in need of repair and are barely able to meet current needs of residents.

Please see Master Response 2 regarding water supply and Master Response 4 regarding wastewater. The City has not identified any issues with their water infrastructure or wastewater treatment plant to serve the Project.

PC-20 The comment asserts that there are already issues at the sewer lines on Starr Avenue and at Vineyard Valley that would be severely impacted by the Project.

Please see Master Response 4.

PC-21 The comment asserts that there are many concerns about the Project ranging from levee access and maintenance to scenic vistas and privacy concerns.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Responses 1 and 3 regarding emergency access and the Napa River levee and Responses to Comments 7-6 and 50-7 regarding visual issues. Privacy is not an issue required to be evaluated in an EIR and is not relevant to this Project.

PC-22 The commenter stated an opinion that there are many circumstances regarding the current environment that must not be ignored by City planners and City Council members.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-23 The comment asserts that the “Flood Wall project” did not include the Proposed Project and that there is concern that the Project would remove safe evacuation and access through the adjacent Vineyard Valley Mobile Home Park.

Please see Master Response 1 regarding emergency evacuation concerns and Master Response 3 regarding the Napa River levee.

PC-24 The comment states the commenter’s concern that the Project would undermine the levee and overwhelm the Army Corps of Engineers strategy to protect Vineyard Valley residents and their homes.

Please see Master Response 3.

PC-25 The comment asserts that Vineyard Valley residents are concerned about water.

Please see Master Response 2.

PC-26 The comment asserts that Vineyard Valley's wastewater discharge sewer is documented to have significant issues when it rains.

Please see Master Response 4.

PC-27 The comment states an opinion that, because the Project's VMT is estimated to be 15.2% higher than the City wide VMT per capita and has a significant and unavoidable impact which cannot be mitigated, that the Project and the EIR should be denied.

Please refer to Responses to Comments 93-8 and 111-2.

PC-28 The commenter asserts that the City Council has an obligation to citizens to protect the environment by denying the Draft EIR.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-29 The commenter is concerned that the Project would increase the need for power.

The Project's energy use and potential impacts to public utilities are described in Section 3.13, Utilities and Section 3.15, Energy. As documented in the Draft EIR adequate facilities and supplies are available to serve the Project and impacts are less than significant. The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-30 The commenter states an opinion that the Project would result in an increase in power outages due to the City's struggling power system.

See Response to Comment PC-29.

PC-31 The comment asserts that Adams Street and Starr Avenue are the only evacuation routes for additional residents from the Project site as well as existing residents in the area.

Please see Master Response 1.

PC-32 The comment states an opinion that parking supply is an issue within the neighborhood and that wildfires that create emergency evacuations would be a problem.

The adequacy of parking supply is not an environmental impact under CEQA; therefore, the commenter's concern is noted for the decision makers and no further response is required. . For concerns regarding emergency evacuation, please see Master Response 1.

PC-33 The comment claims that a lack of parking would require future residents to panic during emergencies and that the Proposed Project would increase traffic congestion during emergency situations.

Please see Master Response 1.

PC-34 The comment suggests that nature should be respected by not building the Project in an area protected by a levee.

Please see Master Response 3.

PC-35 The comment asserts that it is "common sense" that the Project site is not meant for human habitat.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. The Project site is located within the City limits and has been designated and zoned for housing since the 1975 General Plan.

PC-36 The comment states that Project would be built over a Native American burial site that contains human remains and artifacts.

Please see Response to Comment 55-4. There is no evidence that the site is a Native American burial site.

PC-37 The comment asserts that the Wappo tribal chairman was not listed in the Draft EIR as being notified under AB 52.

Please see Response to Comment 55-4.

PC-38 The comment requests an extension of the Draft EIR comment deadline by an additional 30 to 45 days.

Based on requests from the public, the City extended the public comment period from the required 45-days to 67-days to provide more time for review and comment. During this review period, the Draft EIR for the Project was available at (1) the St. Helena Public Library, 1492 Library Lane, St. Helena, CA 94574; (2) St. Helena Planning Department, 1572 Railroad Avenue, St. Helena, CA 94574; and (3) on the City's website at www.CityofStHelena.org.

PC-39 The comment states the commenter's concerns regarding a lack of adequacy of the Project's proposed bicycle and pedestrian facilities.

Please see Response to Comment 1-2.

PC-40 The comment restates the opinion expressed by others that VMT impacts would be significant and unavoidable. The comment also states that the City's 2019 Bicycle Plan calls for Class I multi-use facilities along Adams Street and Starr Avenue, which would connect to other multimodal uses and to the Napa Valley Vine Trail.

Please see Response to Comment 1-2.

PC-41 The comment claims that the Project would be more walkable and bikeable if additional bicycle facilities were included.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 1-2.

PC-42 The comment asserts that the Draft EIR uses outdated or faulty plans for transportation assumptions.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no further response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

PC-43 The commenter states that there is confusion as to why the public meeting is about comments on the EIR rather than comments on the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. The purpose of the hearings held to take comments on the Draft EIR is not to discuss the merits of the Project but rather the adequacy of the information provided in the Draft EIR. The Planning Commission hearing to review the Project will be an opportunity to provide input on the merits of the Project.

PC-44 The comment states an opinion that the Project should consider energy efficiency, housing equity, and resource consumption to achieve a net-zero impact on the environment.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see also Responses to Comments 82-15 and 107-7 regarding state required building code requirements.

PC-45 The comment states an opinion that the affordable housing units should look similar to market-rate units.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-46 The comment states an opinion that there should be at least 1 acre of public open space that connects to a walking path to the Napa River.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-47 The comment states an opinion that the Project should allow at least 50% of the moderate and lower income units to be owner-occupied rather than offered as rentals.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-48 The comment states an opinion that new construction should be fire-resistant with underground utilities.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration. The Project is required to comply with the California Building Code Standards and Fire Code as well as the City's development requirements which oversees undergrounding of any electrical lines.

PC-49 The comment asks whether the City has considered requesting the Project only be served by electric power.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. However, the City has not adopted an ordinance requiring all new construction be electric and it is not a requirement of the state building code.

PC-50 The comment states an opinion that the Project would affect emergency evacuation in the area and that another connection to Silverado Trail is needed to alleviate traffic congestion on Hunt Avenue and Pope Street.

For concerns regarding emergency evacuation, please see Master Response 1. The Project does not include the future expansion of Adams Street connecting to Silverado Trail. This is a separate City project and is not required for the Project.

PC-51 The comment states an opinion that retrofitting toilets would not make the project water neutral and that there needs to be more investment in infrastructure.

Please see Master Response 2.

PC-52 The comment states the commenter's opposition to the Project and requests the Draft EIR comment period be extended.

Based on requests from the public, the City extended the public comment period from the required 45-days to 67-days to provide more time for review and comment. During this review period, the Draft EIR for the Project was available at (1) the St. Helena Public Library, 1492 Library Lane, St. Helena, CA 94574; (2) St. Helena Planning Department, 1572 Railroad Avenue, St. Helena, CA 94574; and (3) on the City's website at www.CityofStHelena.org. The commenter's opposition to the Project is forwarded to the decision makers for their consideration.

PC-53 The comment states an opinion that the intersection of Hunt Avenue and Starr Avenue is unsafe for pedestrians and for people waiting for the bus. The commenter said that cars frequently do not stop fully, and the stop sign is faded.

Transit, pedestrian access, and collisions have been analyzed in detail within Section 3.14, Transportation and Circulation of the Draft EIR and within Appendix K, Traffic Impact Study and no safety impacts were identified. For additional information, please see Response to Comment 74-6.

PC-54 The comment states an opinion that additional traffic would make conditions even more unsafe for children that ride the bus.

Please see Response to Comment 74-6.

PC-55 The comment expresses concern regarding parking in the neighborhood.

The CEQA Guidelines do not require parking be evaluated in an EIR; therefore, the commenter's concern is noted for the decision makers and no further response is required.

PC-56 The comment states an opinion that existing traffic and parking problems have not been addressed by the City and that the Proposed Project would make matters worse.

Existing traffic conditions, along with the addition of the Proposed Project, and 2040 buildout of the City are analysis scenarios which have been analyzed in detail within Section 3.14, Transportation and Circulation of the Draft EIR and within Appendix K,

Traffic Impact Study. The comment does not raise does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. Please see Response to Comment PC-55 that addresses parking concerns.

PC-57 The commenter states they would rather have an affordable housing development similar to Hunt's Grove rather than the potential for new homes to be owned by second homeowners.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-58 The comment states an opinion that there is not enough time to review the Draft EIR and requests that the comment period to be extended.

Please see Response to Comment PC-52.

PC-59 The comment states an opinion that it would not be possible to develop the Project without serious degradation of plant and wildlife species in the area.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see also Response to Comment 14-2 regarding wildlife concerns.

PC-60 The comment states an opinion that the Project would devastate wildlife and plant habitat at the adjacent conservation easement, agricultural lands, and public property.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Responses to Comments 14-2 and 36-3 regarding impacts to biological resources and the conservation easement noted in the comment,

PC-61 The comment states an opinion that the Project is not compatible with current habitat restoration efforts.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. It is unclear from the comment what habitat restoration efforts are ongoing within the Project site.

PC-62 The comment asserts that the City is struggling with water supply and expresses an opinion that the priority for new development should be to provide housing for employees that cannot to afford to live in the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Master Response 2 regarding water supply.

PC-63 The comment states an opinion that the Project is incompatible with available resources and current environmental efforts.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-64 The comment asks whether there has been a survey of people who use the walking trail at the Project site.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-65 The comment asserts that weather events which closed roadways in the City would cause more traffic congestion once Starr Avenue is connected to Adams Street.

Potential Project impacts, as well as impacts related to construction of the Project, along Starr Avenue and Adams Street, and the connection of both roadways to one another, are analyzed in detail within Section 3.14, Transportation and Circulation of the Draft EIR and within Appendix K, Traffic Impact Study. The comment describes that roadways in the area, such as Silverado Trail, were closed due to weather events; however, these closures are assumed to be temporary. Since the closure is not expected to be permanent and is not related to the Project, no further response is required.

PC-66 The comment asks for additional analysis of traffic patterns if Silverado Trail is closed and the effect the closure would have on Starr Avenue, especially during weather related closures.

Please see Response to Comment PC-65.

PC-67 The comment asserts that the traffic issues associated with the Proposed Project are greater than that those evaluated in the Draft EIR.

The comment does not raise does not identify specific areas where the Draft EIR is inadequate; therefore, no further response is required. The commenter’s opinion is noted and forwarded to the decision makers for their consideration.

PC-68 The comment states an opinion that retrofitting toilets would not make the Project water neutral and that water usage is not addressed in the Draft EIR.

The Project's increase in water demand was analyzed in the Draft EIR in Section 3.13, Public Utilities starting on page 3.13-24. Please see Master Response 2 for additional details regarding the Project's water usage and compliance with the City's water neutral requirements.

PC-69 The comment states an opinion that water supply problems should be addressed in more detail in the Draft EIR.

Please see Response to Comment PC-69 and Master Response 2.

PC-70 The comment states an opinion that the Draft EIR comment period is short and asks whether the City staff has the power to extend the comment period.

The comment was addressed during the public meeting and no further response is required. Please see also Response to Comment PC-52.

PC-71 The comment asserts that certain members of City staff have the power to extend the Draft EIR comment period.

Please see also Responses to Comments PC-52 and PC-71.

PC-72 The comment asks how to submit a request for extension of the Draft EIR comment period and if the appropriate authorities would be notified of the request.

The comment was addressed during the public meeting and no further response is required. Please see also Response to Comment PC-52.

PC-73 The comment states an opinion that water is the biggest issue of the Project.

Please see Master Response 2.

City of St. Helena

Special Planning Commission Meeting

November 30, 2021

SECRETARY XINIA GAMERO: And Chair Ponte, we are ready to begin the meeting when you are.

CHAIR JOHN PONTE: I will, as soon as Commissioner Anderson and Commissioner Rothfeld come on. Good evening. Welcome. Thank you for attending the Tuesday, November 30th, 2021 special meeting of the planning commission. There is a little bit of paperwork we need to do first and I'll start by reading this.

"This meeting will be conducted pursuant to the provisions of government code Section 54953 as amended by AB361 which authorizes teleconference meetings under the Brown Act during certain proclaimed states of emergency.

The Governor of California proclaimed a state of emergency related to COVID-19 on March 4th, 2020. This teleconference meeting is necessary so the City can conduct essential business and is permitted under Government Code 54-953 in order to protect public health and safety of attendees.

Consistent with Government Code Section 54953, this planning commission meeting will be

held via teleconference only and will not be physically open to the public. Commission members and staff will be teleconferenced into the meeting by audio and/or video. This meeting will be connected via Zoom Webinar."

Ms. Gamero, you have some additional information for us all?

SECRETARY XINIA GAMERO: Yes, I do. Thank you Chair Ponte. I will share my screen momentarily.

Members of the public who wish to participate in public comment by phone can do so by dialing (669) 900-6833. At the prompt, you will enter the meeting ID, 848 0893 5175. You will then press pound and during public comment you will press star-nine to speak.

Additionally, tonight's meeting will have live Spanish interpretation. To access the interpretation, you will need to use the Zoom application from either your cellphone, tablet, or computer.

Instructions on how to use the Zoom app are listed in English and Spanish on the agenda posted on the City's website.

Once you join the meeting from the Zoom

application, you will see a small globe at the bottom or top of the screen. You will click on the globe and you'll be able to access the live interpretation. We have Marci and Claudia who are our interpreters this evening.

And that concludes my presentation, Chair.

CHAIR JOHN PONTE: Thank you. That takes us to the pledge of allegiance. Commissioner Rothfeld, will you lead us all in the pledge of allegiance, please?

COMMISSIONER MARIKA ROTHFELD: Sure. I pledge allegiance to the flag of the United States of America and to the republic for which it stands, one nation, under God, indivisible, with liberty and justice for all.

CHAIR JOHN PONTE: Thank you very much. Like to call the meeting to order. Ms. Gamero, will you take the roll, please?

SECRETARY XINIA GAMERO: Thank you. Chair Ponte.

CHAIR JOHN PONTE: Here.

SECRETARY XINIA GAMERO: Commissioner Anderson.

COMMISSIONER AUTUMN ANDERSON: Here.

SECRETARY XINIA GAMERO: Commissioner Rothfeld.

COMMISSIONER MARIKA ROTHFELD: Here.

SECRETARY XINIA GAMERO: Commissioner Segura is absent this evening. And Vice Chair Hale.

VICE CHAIR DANIEL HALE: Here.

CHAIR JOHN PONTE: Thank you very much. That takes us to public forum. Under California law, public comments at special meetings are limited to subject on the agenda only; therefore, public comment will take place during consideration of the item. Each person's comments shall be limited to four minutes.

Consent items, we have none tonight, so that takes us to the public hearing for this evening; 5.1, continuing to receive comments on the draft environmental impact report for the Hunter Subdivision project.

I will open the public hearing and at this time, I will ask if any commissioner has any ex-parte communications they wish to bring to our attention.

Seeing none, Director DeRosa, staff report, please.

MAYA DeROSA: Thank you, Chair Ponte. Good evening, planning commission. It's our pleasure to host this special meeting, our second meeting to talk about the Hunter EIR and receive public comments. The public comment period does end today and we have posted all those comments on the agenda page.

As we did on the November 2nd meeting, I'm going to have the project manager, Eric Norris, provide a brief PowerPoint presentation to familiarize the public with what the project proposal is and then we can proceed with the rest of the meeting. And so I'll hand it over to Mr. Norris. Thank you.

ERIC NORRIS: Thank you, Maya. Get out slideshow going here. So yeah, I'll keep this brief, but just for those who weren't here at the first comment meeting, first of all, welcome to the second public comment meeting on the environmental impact report.

I'll give just a brief overview of the project so we all have a clear under -- at least a common understanding of what the project is. This is the location. It's at the end of Adams and -- Adams Street and Starr Avenue. It's

highlighted there in a tan color.

This is the application which we're all looking at currently. This is the only active application on the project site. There are others that will follow on. I'll talk about those in a minute. But at the moment, what the applicant is proposing is to create this subdivision. What this does is it creates lots on which single-family homes can get built and then one additional lot on which multi-family housing would be built.

But this is the only application currently being processed. Now, the environmental impact report looks at the effects of both this subdivision and the subsequent applications that would be needed in order to construct homes on the site.

Real briefly, we're looking at a site that's just a little under 17 acres, 16.9 acres. There are a total of 87 proposed housing units. That breaks down into 51 single-family homes, 25 multi-family homes, and then 11 accessory dwelling units that would be built with the single-family homes.

So of the 51 single-family homes, 11 of

them would have an accessory dwelling unit built with them from day one.

The general plan designation is medium density residential. It has been that way since at least the '90s and we believe probably back into the 1970s, so they're not requesting a change in either the general plan or the zoning. The zoning is also MDR, which matches that general plan designation.

Now, the general plan requires that you build at a number of units which falls between the two density numbers, 5.1 per acre and 16. For this site, that gets down to 87 to 270 dwelling units. They are coming in, therefore, at the very bottom end of the range. The general plan would allow them to build more units than they're proposing to build.

This is the current zoning on the site, so it is designated MDR, as I mentioned before. Variety of other kinds of zones around it, open space, agriculture, high density residential, and then getting further down as it goes sort of to the bottom of the picture, we're starting to get more into the commercial area over near Main Street.

So currently, what the planning commission will be looking at when this goes into a public hearing mode early next year are two things. One of those is the draft environmental impact report that we show as EIR here on the slide. The other is the tentative subdivision map.

Now, in the future, as I mentioned, there are other things that need to get approved. The tentative subdivision map does not give them the ability to build any homes. It simply creates lots.

They will need an affordable housing agreement which is something that's approved by the City council. They will need to have the design of the proposed homes reviewed by the planning commission. And for the multi-family housing, that requires a conditional use permit which is also reviewed an approved by the planning commission.

So those are all future actions which are not part of their current application package, but they will have to, assuming that they get through the first hurdle, getting the subdivision app approved, they'll have to come

back with additional applications.

The draft EIR looks at a variety of topics and I'm sure anyone who's looked online and opened up the document knows that it's very long and very comprehensive. I'm not going to go into all the topics here, but it is basically every topic that we could examine, is being looked at in the EIR, everything from aesthetics to energy and everything in between.

So taking all of those almost 700 pages in the EIR down to a paragraph, if I could, the draft EIR based on the technical studies that were conducted to provide the basis for the analysis concludes that the project's impacts can all be reduced to a total less than significant level which means it may have impacts but they're not significant. They don't rise to a threshold where the City becomes concerned that the impacts are negative, I guess if you want to say it that way, with one exception, and that's vehicle miles traveled.

That's something new that is part of CEQA analysis for just a few years now. It looks at the number of vehicle miles that people who live in this subdivision will drive on an average

day or in an average year. The state is trying to get cities to look at this in an effort to reduce overall vehicle traffic as a part of a strategy to reduce greenhouse gas emissions, improve energy efficiency, and so on.

So that one measure, vehicle miles traveled, is the one impact that is identified as significant and unavoidable, but everything else in the EIR can be mitigated to a level of less than significant, some of those, because there really are no impacts, others because there are mitigation measures which are in the environmental document that says, well, if we would have an impact, if you impose this mitigation measure, that impact is reduced or eliminated.

So a real quick timeline. The project goes back to 2010 when the first application for this subdivision was submitted to the City. Without going through the whole timeline here, suffice to say that in September of this year, September 23rd, we released the draft environmental impact report which is the subject of tonight's meeting. That initially went out for a 456-day review period. We had a public

comment meeting on November 2nd.

One of the inputs that came back out of that meeting was the public saying, we'd really like to have more time to review the EIR. So that now has been extended to today, which gets us to a total of 67 days of public review. Forty-five are required by state law, so the City has gone over and above what's required in order to give the public more time to look at the document.

Looking forward into the end of this year and into next year, we're going to spend the next probably month or so responding to the comments that came in. Those responses all get put into a response to comments or final environmental impact report document. So we'll say, we got thee comments. Here's how we responded to them. The public has an opportunity to review those responses to the comments before it goes into hearings.

We are looking in the first quarter of next year. We don't have a date yet to have actual public hearings on the project which would be then the EIR and the tentative map. And then either later in 2022 or really the time the

applicant chooses, again, those other three applications, the affordable housing agreement, the design review, and the use permit for multi-family housing would come back. Those would all be subject to their own individual public hearings but those are future items not on our calendar at all at this point.

And really briefly, again, just highlighting opportunities for public input. So we're now in the lefthand column which is the 67-day, the expanded public review and comment period. When it comes to the planning commission for the tentative subdivision map, there will be public hearings there. There'll be public hearings in the future at the City council for the affordable housing agreement, and again, additional comments at the -- or public hearings, rather, at the planning commission for the other two items.

So that gets us to tonight's meeting which is, again, an opportunity for the public to provide comments on the draft EIR. The focus of comments, really, should be on the adequacy of that document. It is a technical document. We're looking for information on whether there

was something perhaps analyzed incorrectly, information that we could have maybe updated information or corrected information. Those are the kinds of things we're looking for.

Tonight's meeting is really not the time to comment on must the pros and cons of the project itself. That comes in the public hearings next year.

So that completes my presentation. I will note real briefly the EIR has been available in -- online since the beginning of the public review period. It's also been in printed format the library and the City hall. And here, commission members, is staff's recommendation which is that you receive this presentation, open the hearing, receive comments, close the hearing, and then if any commissioner wants to comment on the EIR, tonight would be an appropriate time to do that.

I'll also mention that -- well, Maya, I guess if they submit an email comment by the end of this meeting, I guess we'll still accept that.

MAYA DeROSA: That's correct.

ERIC NORRIS: Yeah, and there will be opportunities during the public hearings to

comment on the environmental document, but the deadline to get comments in so they're responded to and included in the final EIR really is tonight. And I will end my presentation here and bring it back to the commission. Thank you.

CHAIR JOHN PONTE: Thank you, Mr. Norris. With that, I suppose we will start taking comments from the public, so at this time, we will open the public testimony portion of this hearing. Ms. Gamero, is there any member of the public who wishes to speak on the environmental document?

SECRETARY XINIA GAMERO: One second, Chair Ponte.

ERIC NORRIS: Mr. Chair, if I could, while we're waiting for the speaker to come on, one thing I forgot to mention, the recorded testimony from the first public comment meeting is being transcribed. That'll be part of the written record now.

We're also recording tonight's meeting. That recording will also be transcribed and the comments will be in the written record. So if you speak tonight, you can expect to see your words transcribed and in the final EIR.

CHAIR JOHN PONTE: Thank you very much, Mr. Norris. Ms. Gamero?

SECRETARY XINIA GAMERO: Chair Ponte, there are 13 members of the public at the moment. There are no hands raised.

CHAIR JOHN PONTE: Well --

SECRETARY XINIA GAMERO: Oh, I see Tracy McBride just raised her hand. I will allow you to speak here in a second.

CHAIR JOHN PONTE: Please, Ms. McBride. You're on mute. There you go. Thank you.

TRACY McBRIDE: Okay. Thank you. Good evening, commissioners. Thank you for having this meeting and doing extension and thank you Ms. DeRosa for answering questions that I had between this meeting and the last meeting. I just want to say that I found that the project's attorney's letter that was submitted was threatening.

I thought it was kind of a threatening letter stating that the time period to extend the public comments shouldn't have been granted and I just want to make the comment that we are still in a pandemic and people are struggling with their own jobs and working with the pandemic and

PC-75

PC-76

this is a very, very complicated project, and to understand it, and I want to say I appreciate the extra time given.

And I do hope you'll take some time to read my letter in the packet, but I do just want to super briefly highlight three items that it is a false equivalence and it's incorrect in this draft EIR to state that supplying the cost of water fixtures equates to the water usage for this project.

As many people also state, the safety and evacuation and circulation is not adequately addressed in this EIR project and I also feel that the multi-family, low-income housing is segregated and creating inequity issues for our town that just are not appropriate. So I just want to highlight those three topics.

I also would really encourage the City to continue outreach to the other members of the town through social media like Nextdoor, because I think a lot of people just don't really understand how to, you know, read the City documents, how to access them. They still don't know who to email. I see that question on Nextdoor. How do I email my comments in? Even

PC-76 Cont.

PC-77

PC-78

PC-79

PC-80

though you think this might be really available to al lot of people, I think people are having a hard time understanding, really, how to read it, access it, and to comment. So thank you very much.

CHAIR JOHN PONTE: Thank you very much. Ms. Gamero, anyone else?

SECRETARY XINIA GAMERO: Yes. We have Marina Lavagnino. You can go ahead and speak now.

MARINA LAVAGNINO: Okay, hello. Thank you. I agree that I greatly appreciate that the time was extended. I am one of those people who only found out about this in the last two weeks of the comment period and the documentation is very detailed, which is great, but -- and voluminous, and life is really crazy right now and it's been difficult to find the time, even with the extra month, to go through it carefully, but I have tried to do so.

Secondly, I wanted to say that having these Zoom meetings, while very convenient in some ways, makes it much more difficult to rally the troops to get together and attend the meeting. I think we'd have a greater response

PC-80 Cont.

PC-81

PC-82

and more public comment if we were doing this in person. So I hope that you don't think that any low turnout this evening is representative of a disinterest in the project. I think it's just very challenging for a number of people to get involved in the Zoom call.

My mother, for example, would not do this in a million years, but she might come with me to a public meeting. So hopefully in the spring, we have an opportunity to communicate in person. That would be really wonderful.

I did file -- my sister and I filed a document yesterday and I see that it's part of the agenda packet, so I know you received it, but I would like to read one portion of it that is -- what comes to me as the most important thing that's lacking from the draft EIR, and that related to the recreational aspect of this project.

So there's much to review within the section of public service and recreation; 2.45 persons per household for the purpose of calculating park and recreation facility demands is very different from the eight persons per four-bedroom home estimate used in the utility

PC-82 Cont.

PC-83

PC-84

section. Twelve elementary students among 87 residential units seems low. We would be interested in seeing what the numbers are at Hunt Street, so I'm curious as to whether or not some of the numerical things that look so easy to remedy if they're really going to be accurate.

I'm focusing here on recreation. In Section 3.12-16, it is stated that the City would have a ratio of 4.48 acres per thousand residents, which falls below the goal of 5 acres per thousand residents. So we would be short almost 5 acres of this goal. And interestingly, that's about 40 acres short of the nationally recommended standard mentioned, and don't we in St. Helena desire and deserve the higher standard?

What this section woefully ignores is the recreation usage that will be taken away by this development. Yes, there are parks in St. Helena. Table 3.12-2 lists 11 parks. Eight of these are mini-parks. None of these parks provides a connection to the grandeur of St. Helena's position in the Napa Valley. There is a reason why so many St. Helenans flock to the maintenance path and it is not to look at the

PC-84 Cont.

PC-85

PC-86

PC-87

gravel beneath our feet.

Walking along the berm provides a view of Mount St. Helena, both sides of the valley, beautiful vineyards, unique architecture with water towers and barns, a meadow, a habitat restoration area, and a river, all of which are home to numerous wildlife, and there's a tremendous view of the sky.

From glorious sunrise to inspiring sunset, people come to this area to experience nature. It is convenient to the center of town and the library. It is free and currently available to all. It is a natural resource that provides space that we need that isn't available in any of our 11 parks. This resource should be better understood if we are trying to document St. Helena's recreational facilities. It will be drastically diminished if homes are built up to the edge of the maintenance road. So I covered a few other --

SECRETARY XINIA GAMERO: (indiscernible), I would like to note that your four minutes are up, so if you would like to (indiscernible) your comment --

MARINA LAVAGNINO: Perfect.

PC-87 Cont.

PC-88

SECRETARY XINIA GAMERO: -- that would be good.

MARINA LAVAGNINO: That's all that I needed to say. Thank you very much.

CHAIR JOHN PONTE: Thank you. Ms. Gamero, next if we -- assuming we have one.

SECRETARY XINIA GAMERO: I'll give -- we have Matt Courtney who would like to speak. You may go ahead and speak now.

CHAIR JOHN PONTE: -- Courtney, please.

ANYA COURTNEY: Hello. My name is Anya Courtney. I am ten years old and I go to St. Helena Elementary School. I looked over the EIR and saw there was nothing said about climate change. I don't think it makes sense to build a ton of houses where there is a river that can flood, especially now during climate change when the floods are stronger and more unpredictable. PC-89

I am a skier and I notice every year there is less and less and less snow pack which means less and less water. This EIR completely ignores this reality. PC-90 I don't think this EIR does a good job of covering the impact of this project on air pollution. PC-91 I don't like the idea of hundreds more cars driving on my street every

day. I like living in our small town and breathing fresh air.

Also, I use that fun grassy area to play in the outside. All in all, in my opinion, the EIR does a terrible job of taking into account all of these issues that are important to me and our community. Thank you.

CHAIR JOHN PONTE: Thank you. Ms. Gamero?

SECRETARY XINIA GAMERO: Waiting here a couple of second, Chair. I do not see any more hands raised at the moment, Chair Ponte.

CHAIR JOHN PONTE: All right.

MAYA DeROSA: Chair Ponte, I did receive an email from somebody who's having trouble joining and I advised that they call in, so we might want to just give it another minute or so to give them an opportunity to dial in. Thank you.

CHAIR JOHN PONTE: Good.

SECRETARY XINIA GAMERO: I do see a hand raised, Chair Ponte.

CHAIR JOHN PONTE: Okay.

SECRETARY XINIA GAMERO: Greg Reynolds, Vineyard Valley. You can begin to speak now, Mr.

PC-91 Cont.

PC-92

Reynolds.

GREG REYNOLDS: Thank you. (indiscernible). Appreciate an opportunity to speak again. Appreciate you folks extending this experience. I just wanted to comment that I am the managing partner for Vineyard Valley. I had commented the first time around and a couple times online. The comments submitted yesterday by Vineyard Valley Mobile Home Park, I just wanted you guys to be -- realize that they included an additional 55 people who put their name on our comments.

PC-93

We have that documented in writing, et cetera, so that all of them felt comfortable with what we had put together as our response and I wanted to go on record to share that we have email support for all 55 names and a significant number of folks that would like to see this EIR evaluated in a different and more thoughtful way than what appears to be what's in front of us at this point.

PC-94

That's it. Thank you.

CHAIR JOHN PONTE: Thank you very much, Mr. Reynolds. Ms. Gamero?

SECRETARY XINIA GAMERO: There are no

additional hands raise at the moment, Chair Ponte.

CHAIR JOHN PONTE: Let's pull it back to the commission for a few seconds. Is there any commissioner that has questions or comments on the environmental document? This would be the time for that. I do not see any. So Ms. Gamero, Director DeRosa, have we gotten that phone call yet?

SECRETARY XINIA GAMERO: I do not see anybody that has -- any of the attendees that are attending this meeting via phone. Oh, I do see a phone number. Not sure if they will be raising --

MAYA DeROSA: Can you go over the instructions again on how to raise your hand when you're on the phone?

SECRETARY XINIA GAMERO: Yes. So during public comment, now, you can press star-nine and a hand will be raised so I can see it. There you go. Okay. Please state your name for the written record. Thank you.

I will ask you to unmute. Seems like you are muted as well. Can you -- I believe you (indiscernible) now.

JENNA LAVAGNINO: Hello.

CHAIR JOHN PONTE: Good evening.

JENNA LAVAGNINO: Hi. My name is Jenna Lavagnino and I live on Del Rio in Vineyard Valley. And one thing that -- I walk out on the berm once, sometimes twice a day. I've been enjoying it since I was a kid. One thing I've noticed that I don't think anyone's ever talked about is that as far as the recreation aspect of the area, I see people on a weekly basis.

I see fathers and mothers teaching their children how to ride a bicycle. I see elderly people walking with a cane, getting exercise. I see people who are stroke victims walking with their son -- I saw that yesterday -- as a way to spend time with each other as well as doing recreation as well as physical therapy.

The other thing I see, I see groups of people coming out and they bring their chairs and they fly model airplanes. I see families coming out and they bring cooler and they've got their sodas and their kids are riding bikes and they've got their little model airplanes and that type of thing. So I see this on a weekly basis and the space out here allows for that type of activity.

PC-95

The smaller parks, not as much. There's trees and wires and telephone, you know, wires and such.

And I just feel like there's a real family connection out there where you've got people spending time. They're not on their cellphones. They're not on their laptops. They're not playing video games. It's families out in nature, moving, talking, laughing, learning.

And I just think that that's a very important aspect and the space allows for that and I think in a time where everyone is trapped on their phones and their, you know, TVs and such, to have a space where families can go and congregate and work together and be together and learn together is hugs.

So that's just one aspect I really haven't heard about while researching this. So that's really it. That's my two cents. We need this space and if we don't have it, there's going to be a lot less activity of the such that I just talked about, so that's it I guess.

I hope that you will take this into consideration along with all the other -- I mean,

PC-95 Cont.

the water issues, sanitation issues, crime, fire, flood. I mean, those are all super, super important, but I think this is a really valuable thing to consider as well. So thank you so much.

CHAIR JOHN PONTE: Thank you very much. Do we have anyone else?

SECRETARY XINIA GAMERO: No hands raised, Chair Ponte.

CHAIR JOHN PONTE: No hands raised. All right. I will ask one more time if any commissioner has anything they'd care to say. I don't see anything. Well, unless there's anyone else out there who wishes to say something --

SECRETARY XINIA GAMERO: I do see a hand raised, Chair (indiscernible) and it's (indiscernible) a phone number, so if you could state your name for the written record I will give you permission to speak now.

I believe you are also muted. I will try to unmute you.

ANGELA ZIVKOVIC: -- hear me?

CHAIR JOHN PONTE: We can no. Thank you.

ANGELA ZIVKOVIC: Oh, wonderful. Hi. My name is Angela Zivkovic and I wrote in a

PC-96

letter with some comments and I just wanted to also state them at this meeting. I have some concerns about the adequacy of the environmental impact report with regard to the fact that most of the data that are being used to make evaluations about whether there's enough water and whether it makes sense to consider the impacts, like the impact on potentially the traffic flow and other issues.

None of these are actually taking into account the fact that there's a lot of changes that are taking place right now due to climate change. I think that we really have to, you know, be realistic about the fact that we practically ran out of water even just without this development this year in this town and that had it not been for that one big storm in October, we would be in a really dire situation right now a month later with water for this entire community.

And to put in even more housing which would need to accommodate hundreds more people's water needs, I think it actually not very well considered and it doesn't take into account the fact that we seem to be having a lot of drought

PC-97

PC-98

PC-99

issues and that that situation is going to be unpredictable going forward.

The other issues that I raised had to do with climate change impact on the likelihood that there be a catastrophic flood that will occur in the near future potentially. We do see bigger and bigger storms all the time because of climate change and even the Federal Emergency Management Agency has revised the way that they consider what is a flood zone.

The current environmental impact report does not take any of that into account and uses outdated flood scaling and assessment strategies. FEMA does not use the concept of the hundred-year flood zone anymore as of October of this year. That is now an outdated concept. In recognition of climate change, they of course are now actually considering that, you know, these algorithms have to change from year to year because we can no longer predict climate.

That's just the kind of phase we're in. It's an unfortunate and sobering fact, so the fact that this development is in a flood zone and we think that oh, well, it's okay, because there's a levee; levees fail and the likelihood

PC-99 Cont.

PC-100

PC-101

PC-102

that this one might fail under a catastrophic flood situation is very possible.

And then finally, I also brought up concerns regarding evacuation and safety with regard to having hundreds more individuals living in the area where we already have the highest density in town and we also have some of the most vulnerable populations in town, including low-income housing that's already right there, adjacent to this proposed development, as well as elderly housing and other high density housing areas that all are going to be needing to use the same emergency evacuation routes that are going to be highly impacted by having a higher number of people living here.

And because there's more and more fires every year, in emergency evacuations our -- a growing reality for us =, this is something that is not being accounted for correctly in the environmental impact report. So I encourage you to please read the full statement that I sent in and I thank you for your consideration.

CHAIR JOHN PONTE: Thank you very much. Do we have any further comments?

SECRETARY XINIA GAMERO: No further

PC-102 Cont.

PC-103

PC-104

hands raised, Chair.

CHAIR JOHN PONTE: I'm a little reluctant to halt the meeting after 40 minutes, but unless there's somebody else who wishes to come forward, I will do that. All right.

I will close the public hearing and that finishes this item and moves us on to Item 6 which is new business. Don't see any. And schedule matters, none.

Number eight, department reports. Director DeRosa, do we have anything for this evening?

MAYA DeROSA: Yes. Just want to let you know that we will be -- our next meeting will be December 9th instead of the 7th, so I think you all have your Zoom information for that, but just a friendly reminder and we'll see you at that meeting. Thank you.

CHAIR JOHN PONTE: Agenda forecast, as always, are available on the City website and this is also the time if any member of the commission wishes to see something added to a future agenda. Is there any member of the commission that has something -- I don't see any hands waiving around for that.

So that brings us to item ten, which is adjournment and we are adjourned. Thank you very much.

C E R T I F I C A T I O N

I, Sonya Ledanski Hyde, certify that the foregoing transcript is a true and accurate record of the proceedings.

Date: December 8, 2021

Sonya Ledanski Hyde

Responses to Planning Commission Meeting Commenters
November 30, 2021

PC-74 The comment states an opinion that the Project attorney's letter regarding extension of the Draft EIR comment period was threatening.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-75 The comment asserts that residents are still struggling through a pandemic and expresses the commenter's opinion that the extension of the comment period is appreciated.

Please see Response to Comment PC-52.

PC-76 The comment states an opinion that supplying the cost of water fixtures would not equate to the water usage of the Project.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see also Master Response 2.

PC-77 The comment states an opinion that safety and evacuation and circulation are not adequately addressed in the Draft EIR.

Safety, collisions, and overall circulation are all analyzed within Section 3.14, Transportation and Circulation of the Draft EIR and within Appendix K, Traffic Impact Study. For concerns regarding emergency evacuation, please see Master Response 1.

PC-78 The comment states an opinion that the multifamily housing is segregated from the rest of the Project and would create inequity issues in the City.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-79 The commenter encouraged City staff to continue outreach to the community through social media and educate residents on how to access the Draft EIR and provide comments.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-80 The commenter states that they appreciate the extension of the comment period but that it is still difficult to find the time to review the Draft EIR.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-81 The comment states an opinion that allowing attendance of the public meeting through Zoom results in low in-person turnout and fewer public comments.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. See also Response to Comment 30-6 regarding online public meetings.

PC-82 The commenter states that they would appreciate an opportunity during the spring to comment on the Project in person.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. The City will post a notice when the Project is scheduled for hearings before the Planning Commission as well as City Council.

PC-83 The comment states their opinion that the estimated persons per household for the purposes of calculating park demand is very different from the estimate used in the utility section. The commenter also asserted that the estimate of 12 elementary students from the Proposed Project seems low.

Please see Response to Comment 70-4.

PC-84 The commenters states their interest in the persons per household and number of elementary students that live along Hunt Street.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required.

PC-85 The comment states an opinion that the City's parks inventory does not meet park ratio goals and that residents of the City desire and deserve a higher standard.

Park ratio goals are discussed in Section 3.12 of the Draft EIR. Please see also Response to Comment 70-5.

PC-86 The comment states an opinion that the Draft EIR ignores the loss of the recreational value of the maintenance path.

Please see Responses to Comments 70-6 and 89-3.

PC-87 The comment states an opinion that the Project site is visited for recreation and to experience nature and that the Project would diminish a recreational resource.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. Please see Response to Comment 82-11.

PC-88 The comment states an opinion that the Draft EIR does not mention climate change and that it does not make sense to build houses where it can flood.

The Draft EIR addresses climate change in Section 3.7, Greenhouse Gas Emissions. Additionally, please see Master Response 3 which addresses climate change concerns.

PC-89 The comment asserts that there is less snowpack each year which results in less water availability and that this is not addressed in the Draft EIR.

Please see Master Response 2.

PC-90 The commenter states an opinion the increase in traffic generated by the Project would significantly impact air quality.

Please see Response to Comment PC-5.

PC-91 The commenter states that they play in the grassy areas of the Project site and opines that the Draft EIR does not account for issues important to the community.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 82-11.

PC-92 The commenter said that there are an additional 55 people that signed the comment letter representing the concerns of the Vineyard Valley Mobile Home Park.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The comment is noted and forwarded to the decision makers for their consideration.

PC-93 The comment asserted that the residents of Vineyard Valley would like to see the Project evaluated more thoughtfully than what is provided in the Draft EIR.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration.

PC-94 The comment asserts that residents use the Project site as a recreational area and it should be preserved for recreational purposes.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. The commenter's opinion is noted and forwarded to the decision makers for their consideration. Please see Response to Comment 82-11.

PC-95 The comment states an opinion that, in addition to loss of a recreational area, the Project would also result in effects on water, sanitation, crime, fire, and floods.

The comment does not identify any specific areas where the Draft EIR analysis is inadequate; therefore, no response is required. Please see Master Responses 1, 2, 3 and 4 that address concerns associated with public safety, water supply, the Napa River levee, and wastewater. See also Responses to Comments 39-5 and 121-15 regarding wildfire.

PC-96 The comment states the commenter's concern about the adequacy of the Draft EIR due to data relied upon to evaluate water supply and traffic.

Please see Master Response 2 that addresses water supply and Responses to Comments 10-2 and 89-2 regarding traffic.

PC-97 The comment states an opinion that the Draft EIR does not account for changes occurring due to climate change, including less water availability.

Please see Master Responses 2 and 3 and Responses to Comments 14-9 through 14-17.

PC-98 The comment states an opinion that the Project does not consider drought issues and that new development would require more water to accommodate residents.

Please see Master Response 2.

PC-99 The comment states an opinion that climate change raises the likelihood of a catastrophic flood and that FEMA has revised what is considered a flood zone.

Please see Master Response 3.

PC-100 The comment states an opinion that the Draft EIR does not account for climate change and uses outdated flood data.

Please see Master Response 3.

PC-101 The comment states an opinion that it is a possibility that the levee would fail under a catastrophic flood situation.

Please see Master Response 3 regarding the potential for levee failure.

PC-102 The comment states an opinion that the Project would exacerbate problems with emergency evacuation.

Please see Master Response 1 regarding emergency evacuation.

PC-103 The comment states an opinion that fire incidents and emergency evacuation incidents are increasing and that this is not accounted for in the Draft EIR.

Please see Master Response 1 regarding emergency evacuation.

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Appendix A

Hunter Subdivision Hydraulic Modeling Analysis

PROJECT MEMORANDUM

HUNTER SUBDIVISION HYDRAULIC MODELING ANALYSIS

Date: June 24, 2022

City of St. Helena

Prepared By:	Ryan Orgill, P.E. and Mike Wetterau
Reviewed By:	Tim Loper, P.E.
Subject:	Hunter Subdivision Hydraulic Modeling Analysis

Purpose

The City of St. Helena (City) contracted Carollo Engineers, Inc. (Carollo) to conduct a hydraulic analysis of the impact that the proposed Hunter Subdivision (Development) will have on the City's wastewater collection system.

Background

The City contracted Carollo to prepare their Integrated Utility Master Plan (Master Plan). As part of the Master Plan, Carolllo constructed a hydraulic model of the City's wastewater collection system using the InfoSWMM software package, developed by Innovyze, Inc. The hydraulic model was used to perform a capacity analysis to identify capacity deficiencies within the collection system under peak flow conditions.

The City has received a request from the developer to construct a new development within the City. The proposed development is located at the eastern end of Adams Steet in the northeastern portion of the City, as shown on Figure 1. The developer proposes to connect 51 single family residences (SFR), 25 multi-family residences (MFR), and 11 accessory dwelling units (ADUs) to the City's collection system. A summary of the proposed development is summarized in Table 1.

Table 1 Hunter Subdivision Summary

	Dwelling Units	Area (acres)
Single Family Residence	51	16.9
Multi-Family Residence	25	3.1
ADUs	11	--
Non-Developed	--	0.6

Notes:
(1) Source: Request for Proposals, Hunter Property Residential Subdivision Project (September 14, 2017).

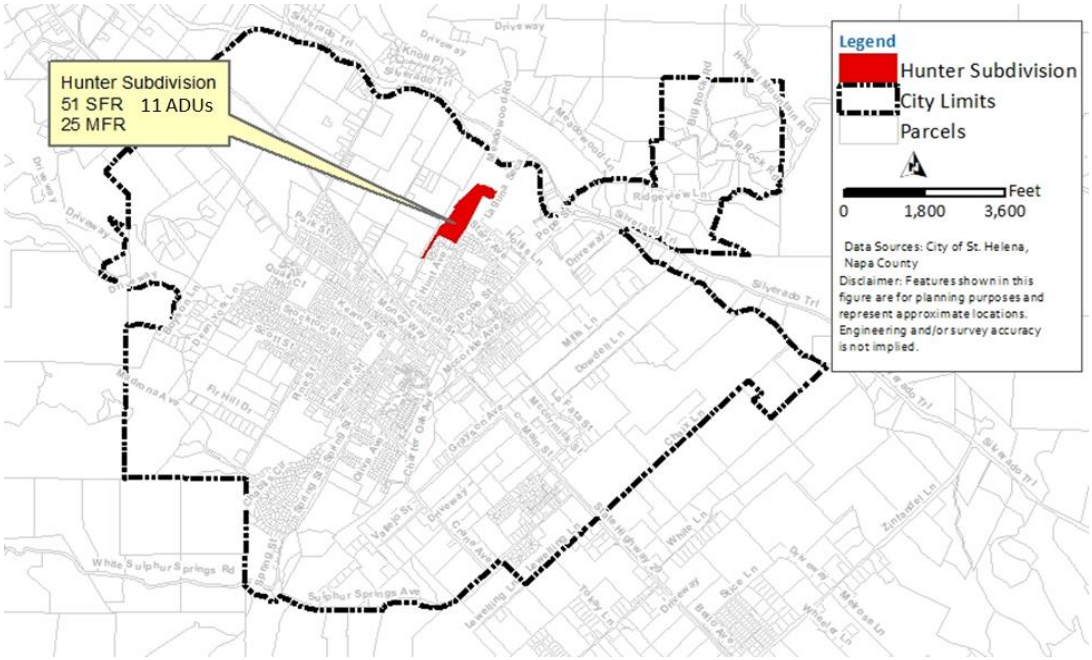

Figure 1 Hunter Subdivision

Flow Projections

The developer plans to develop approximately 20.6 acres (ac) with 51 SFR, and 25 MFR. Flow estimates were developed for the proposed development consistent with the City's Master Plan. Table 2 summarizes the ADWF estimates for the proposed development. The proposed development is estimated to increase the ADWF by approximately 12,289 gallons per day (gpd) or 0.01 million gallons per day (mgd). The peak rain derived inflow and infiltration (RDII) estimates for the proposed developments were developed based on a peak RDII rate of 500 gpd/ac, which is consistent with the Master Plan. With an area of 20.6 ac, the proposed development has a projected peak RDII contribution of 9,900 gpd (0.01 mgd). The estimated peak wet weather flow (PWWF) associated with the proposed development is 23,400 gpd (0.02 mgd).

Table 2 Hunter Subdivision Flow Projections

	ADWF (gpd)	Peak RDII (gpd)
Single Family Residence	8,200	8,300
Multi-Family Residence	4,000	1,600
ADUs	1,800	0
Non-Developed	0	30
Total	**14,000**	**9,900**

Notes:
(1) ADWF is calculated by multiplying the projected increase in residential units by the residential density of 2.45 persons per household and multiplying the result by the per capita flowrate of 66 gpcd.
(2) Planned developments within the existing service area were assigned a peak RDII rate of 500 gpd/ac.

Model Update

This section discusses the necessary model updates to properly evaluate the impacts that the proposed development has on the City's collection system. They hydraulic model was updated by adding the wastewater loads to the of point of connection at the intersection of Del Rio Court and Paseo Grand Drive.

Evaluation Criteria

The evaluation criteria used in this this study are consistent with the evaluation criteria used in Master Plan. The following summarizes the evaluation criteria used for this study:

- For existing sewers under PWWF condition, a minimum surcharge depth of three feet below the manhole rim.
- For new sewers under PWWF condition, a maximum flow depth to pipe diameter (d/D) ratio of 0.75.
- Under, Peak Dry Weather Flow (PDWF), no surcharging is allowed.

Hydraulic Analysis

The capacity evaluation identifies areas in the collection system where flow restrictions occur or where pipe capacity is insufficient to convey design flows. Sewers that lack sufficient capacity to convey design flows create bottlenecks in the collection system that can potentially cause sanitary sewer overflows (SSOs). This section discusses the impacts of the proposed development and verifies if the recommended improvement project sizing developed in the Master Plan are still adequate.

Under existing conditions, the Master Plan showed that there is sufficient capacity in the system under dry weather conditions, but under PWWF conditions, deficiencies upstream of the proposed development's point of connection were identified. After replacing a capacity limited (bottleneck) sewer this allowed for higher peak flows to be carried to downstream sewers. In some cases, this increase in peak flow overwhelms the downstream sewers, which creates additional deficiencies. This was the case for proposed project WWGM-6 from the Master Plan. Project WWGM-6 includes the replacement of approximately 450 feet of 15-inch, and 18-inch diameter pipeline along Del Campo Court, between Hunt Avenue and Paseo Grand Drive; and 910 feet of 18-inch diameter pipeline along Paseo Gran Drive, between Del Campo Court and Los Robles Court. The flow levels of the pipeline cause an SSO upstream under PWWF conditions. To mitigate the risk of SSO occurring during PWWF conditions, it is recommended that the existing pipeline be replaced with a 21-inch diameter pipeline. Project WWGM-6 alignment is shown in purple on Figure 2. This is the only project downstream of the proposed development's point of connection, which is shown on Figure 2.

Under dry weather conditions, the addition of the Hunter development did not trigger any capacity deficiencies. Under PWWF, the addition of the Hunter development did not identify any additional deficiencies downstream of the proposed development. The hydraulic model found that the existing system with improvements have sufficient to convey the projected build out flows identified in the Master Plan as well as the additional flow from the proposed development. The hydraulic analysis verified that the recommended improvement project sizing developed in the Master Plan are still valid.

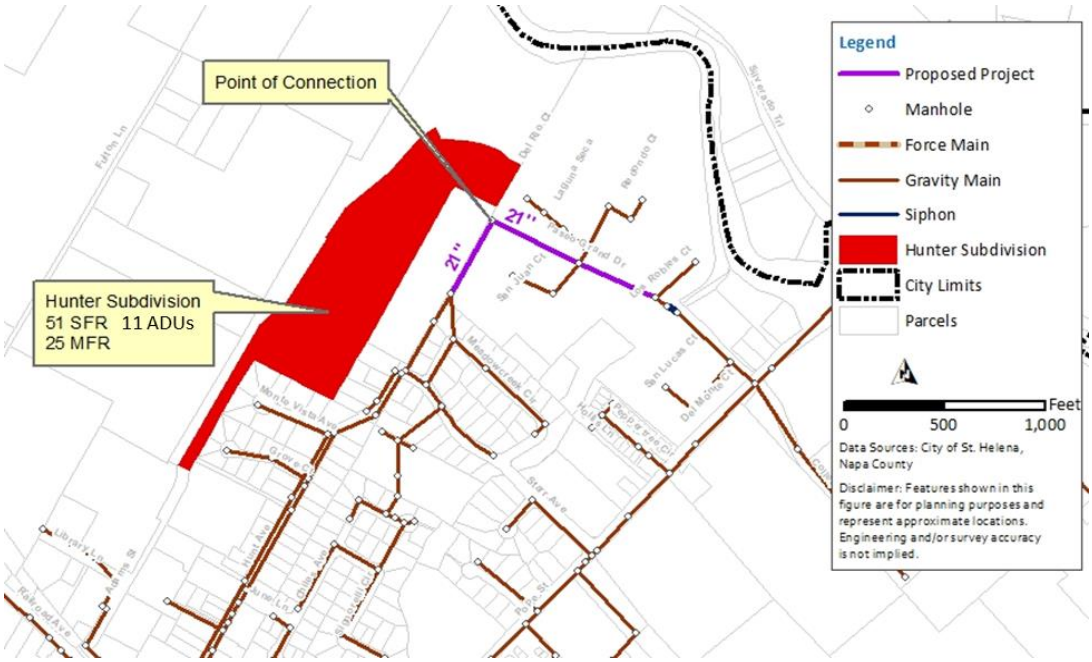

Figure 2 Downstream Recommended Improvements

Cost Share

This section discusses the project cost share that Hunter Subdivision is responsible for paying. Cost share is determined based on contribution of average dry weather flow (ADWF) as well as PWWF. The Hunter Subdivision is responsible for paying a proportion of Master Plan project WWGM-6 since, it is the only Master Plan project downstream of the point of connection and no additional deficiencies were identified. Table 3 summarizes the contributing flows from various users at Project WWGM-6 under buildout ADWF conditions and PWWF conditions. Based on this analysis Hunter Subdivision is responsible for paying six percent of $608,000 or $36,500 (ENR 20-City Average Construction Cost Index for April 2020 of 11,413) of proposed Master Plan project WWGM-6 based on the ADWF contribution.

Table 3 Hunter Subdivision Cost Share

User	ADWF (mgd)	Peak Wet Weather Flow with Master Plan Improvements (mgd)	Percent of ADWF	Percent of PWWF
Single Family Residence	0.14	4.15	93%	99.5%
Hunter Subdivision	0.01	0.02	6%	0.5%
Other Future Users	< 0.01	<0.01	1%	<0.1%

Conclusion

The updated hydraulic model was used to evaluate the impact that the proposed developments have on downstream collection system under various conditions. The hydraulic model verified that the recommended improvement project sizing developed in the Master Plan are still adequate. Based on the project cost share analysis, Hunter Subdivision is responsible for paying six percent or $36,500 (ENR 20-City Average Construction Cost Index for April 2020 of 11,413) of Master Plan project WWGM-6 based on their ADWF contribution to the system.

Prepared by:

Ryan Orgill

Author Name: Ryan Orgill, P.E.

Appendix B

Attachments to Letters 45, 46, 65 and 84

ATTACHMENT TO LETTER 45

Segregation by Design

By Jessica Trounstine
University of California, Merced

Abstract:
Over the course of the 20th century the spatial scale of residential segregation along race and class lines increased. In the late 1800s, whites and people of color, renters and owners, poor and wealthy, were separated from each other in small clusters, so that residential segregation occurred block-to-block. By the middle of the 20th century segregation patterns had transformed; residents became segregated neighborhood-to-neighborhood. Throughout the post-war period, segregation between whole cities rose as the nation suburbanized. In recent decades, city-to-city segregation has remained remarkably persistent despite increasing neighborhood integration. Because political representation is geographically determined, these changing patterns have had profound political consequences – generating opportunities for exclusion and increasing polarization. I argue that local governments have been instrumental in driving and shaping these patterns; and they have done so largely in the name of protecting both property values and exclusive access to public goods for white property owners. When property values and public goods exclusivity were threatened, property owners changed their tactics – shifting the spatial of segregation higher. This process has always been Segregation by Design.

Conventional wisdom holds that segregation and the resulting deficit in services that the poor and people of color experience in American cities is driven by a combination of individual racial prejudices, market logic, and federal policy. This is an insufficient account because it ignores the institutional setting in which racism, economics, and federal law are embedded. Local politics structures the way in which *all* of these forces unfold.

Using qualitative historical evidence from large cities throughout the United States and quantitative data from hundreds of cities, I demonstrate that segregation and the unequal distribution of public goods accruing to individuals and neighborhoods are a function of local policies and political battles. Land-use planning, zoning, and redevelopment have been utilized by white homeowners and businesses seeking to enhance property values and monopolize public goods to generate segregation and inequality in access to benefits for over 100 years.

The changing spatial patterns of segregation have had important implications for political representation. Poor and minority residents have become more isolated and less able to secure political responsiveness and public benefits. In turn, segregation affects both local and national politics. In cities, segregated communities are more polarized and less willing to fund public goods. At the national level, neighborhoods that successfully resisted integration during the civil rights era are markedly more conservative today.

Instead of receding, segregation within cities and between cities and suburbs has grown over the past several decades, further antagonizing the imbalance of public benefits between the haves and the have-nots.

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Introduction

"Segregated people in a nation that professes to be a democracy soon become a frustrated people. Those who segregate others soon become frightened, insecure people forced to accept and invent prejudice to justify their actions" Robert C. Weaver, *The Negro Ghetto*, 1948

City services sustain, prolong, and even save lives. In the latter half of the 19th century, urban American began a rapid ascent. City populations and economies were booming. But so too were their filth, their disease, and their divisions. By 1900, infectious and parasitic diseases killed nearly 8 in every 1,000 residents; accounting for more than 45% of all deaths (Tippett 2014) and more than 60% of deaths in children (Guyer et al 2000).[1] Between 1900 and 1940, the overall mortality rate in the United States declined by 35%[2] (Linder and Grove 1947) and the infectious disease mortality rate declined by 75% (CDC 1999).[3] In some cities in 1900, 30% of babies would not live to celebrate their first birthday (Meckel 1990). Estimates indicate that between one quarter and one half the decline in total mortality can be attributed to the development of public water and sewer systems. Local public works significantly reduced outbreaks of diseases like cholera, typhoid fever, diarrheal diseases, and malaria (Cutler and Miller 2006, Troesken 2004).[4] Over time, the growth of municipal fire and police forces, street cleaning and refuse disposal, childhood vaccination and physical examination programs, regulation of food supplies (e.g. requirements for milk pasteurization), and the implementation of

[1] Pediatrics. 2000 Dec;106(6):1307-17. Annual summary of vital statistics: trends in the health of Americans during the 20th century. Guyer B1, Freedman MA, Strobino DM, Sondik EJ.
[2] Total mortality declined from 17 per 1,000 persons to 11 per 1,000 persons.
[3] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4829a1.htm#fig1
[4] It is important to note that the dramatic improvement in mortality from water and sewer systems required the development of filtration and treatment techniques, which were not immediately available when the systems were first built.

building codes all worked to prolong life expectancy (Condran and Cheney 1982, Haines 2001, CDC 1999).

However, such benefits were neither inevitable nor universal. From the beginning poor and minority neighborhoods received fewer and lower quality services: they were less likely to be connected to sewers, have graded and paved streets, or benefit from disease mitigation programs.[5] Today, the quality of public goods in the United States remains highly variable. Some people have access to well-paved and plowed roads, sewers that never overflow, public parks with swing sets and restrooms, adequately staffed police and fire forces, and clean water. Others do not have access to these resources. The quality of such services is largely a function of the neighborhood, city, and state in which a person resides. The degree to which the poor and people of color have been concentrated into identifiable residential locations (e.g. segregation), varies from place and to place, and everywhere has changed dramatically over time.

Over the course of the 20th century the spatial scale of residential segregation along race and class lines increased (Logan et al 2015, Reardon et al 2009, Lee et al 2008). In the late 1800s, whites and people of color, renters and owners, poor and wealthy, were separated from each other in small clusters, so that residential segregation occurred block-to-block. By the middle of the 20th century segregation patterns had transformed; residents became segregated neighborhood-to-neighborhood. Throughout the post-war period, segregation between whole cities rose as the nation suburbanized. In recent decades, city-to-city segregation has remained remarkably persistent despite increasing neighborhood integration. Because political representation is geographically determined, these changing patterns have had profound political

[5] This book explores race and class divisions in local politics and residential locations. There are many ways one might go about defining these groups. As explained in more detail in Chapter 1, I focus on divisions between whites and nonwhites, and homeowners and renters. I use the terms minority and nonwhite interchangeably. I also use the terms black and African American interchangeably.

consequences – generating opportunities for exclusion and increasing polarization. I argue that local governments have been instrumental in driving and shaping these patterns; and they have done so largely in the name of protecting both property values and exclusive access to public goods for white property owners. When property values and public goods exclusivity were threatened, property owners changed their tactics – shifting the spatial of segregation higher. This process has always been Segregation by Design.

An example from Southern New Jersey is illustrative. Camden and Cherry Hill, New Jersey are similarly sized cities, just across the Delaware River from Philadelphia. Camden is home to two superfund (toxic waste) sites; Cherry Hill is home to none.[6] In Camden only 1.7% of state roads had good pavement in 2004[7] compared to 35% in Cherry Hill.[8] Camden has 22 combined sewer overflow outfalls (where raw sewage and storm water may be released to the surface during wet weather), while Cherry Hill has zero. Camden offers no e-waste recycling and no yard waste collection; Cherry Hill provides both. In 2012, Camden's water supply ran so low that residents were required to boil water for consumption and were prohibited from watering their gardens.[9] In contrast, Cherry Hill has a clean, plentiful water supply. The Cherry Hill Public Library has more than 400,000 circulating materials, more than 300 adult programs and classes, and 67 public computers.[10] In 2011, Camden shuttered the doors of its main library and handed control of the remaining two small branches to the county.[11] Cherry Hill offers 63 recreational facilities (parks, art centers, tennis courts, etc.) for its residents and supports 13

[6] https://www.epa.gov/superfund/search-superfund-sites-where-you-live
[7] http://www.state.nj.us/transportation/works/njchoices/pdf/camden.pdf
[8] Personal communication with New Jersey Department of Transportation. The NJDOT provided data from the NJDOT Pavement Management System by email. Available from the author by request.
[9] http://www.nj.com/news/index.ssf/2012/06/camden_residents_advised_to_bo.html
[10] http://www.chplnj.org/about/documents/2015%20Annual%20Report%20-%20FINAL.pdf
[11] http://www.nj.com/news/index.ssf/2011/02/main_branch_of_camden_public_l.html

different swim clubs.[12] Camden has 25 parks and 8 community centers.[13] Between 2007 and 2012, Camden's city budget declined by about $245 per resident, while Cherry Hill's increased by about $12 per capita. Clearly, living in Camden is unlike living in Cherry Hill. So, how did Cherry Hill and Camden get to be so different?

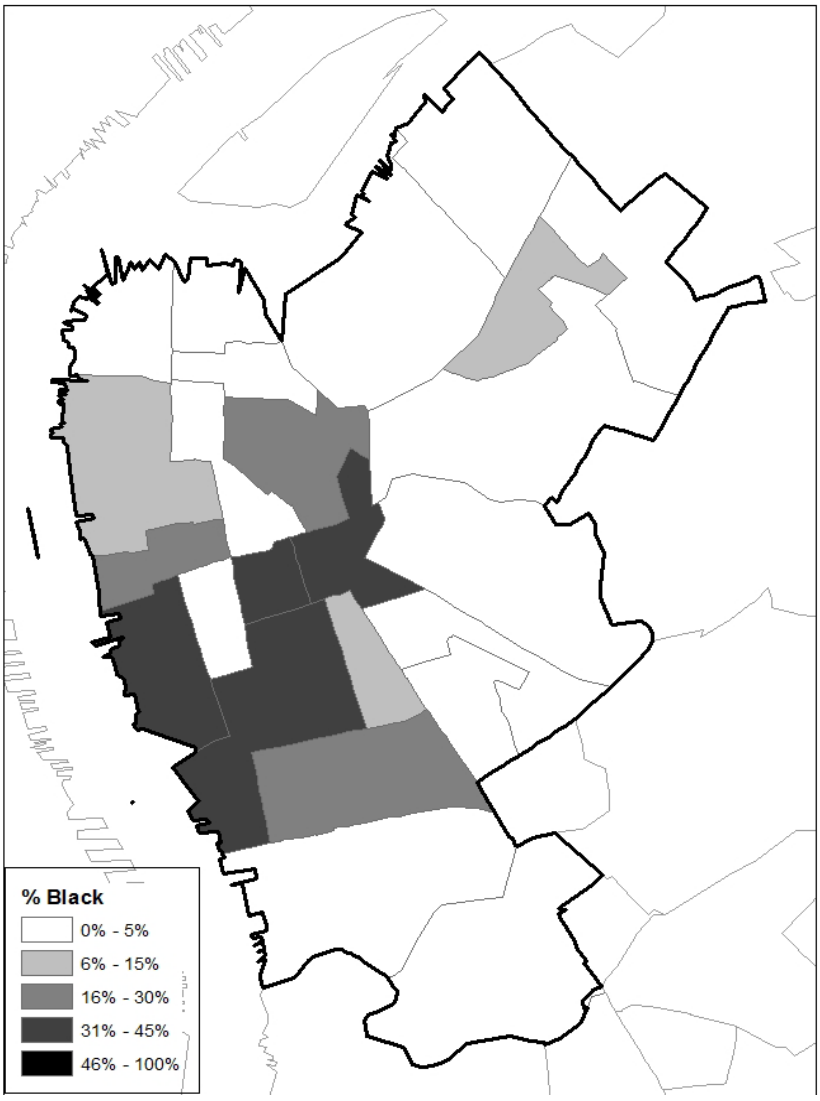
The story begins with a focus on Camden at the turn of the century. Although Cherry Hill was incorporated as a municipality in 1844, it remained a small, undeveloped agricultural community in the first few decades of the 20th century. In 1900, Camden had a population of nearly 76,000 residents. The city boasted 55 miles of sewers, 79 miles of water mains, and about 38% of the city's streets were paved; figures that suggest that Camden's development was right in-line with national averages. Also similar to other cities, were Camden's level of race and class segregation. By the turn of the century, Camden was home to two well-established free black communities named Fettersville and Kaighnsville (Garwood 1999). Established in the 1830s (Fettersville) and 1840s (Kaighnsville), these communities were comprised of small lots affordable to people of modest incomes, many of whom were African American (Garwood 1999). One of Fettersville's neighborhood churches, the Macedonia African Methodist Episcopal Church, was believed to be a stop on the Underground Railroad (Garwood 1999). While the majority of Camden's black residents lived in Fettersville and Kaighnsville, both neighborhoods were predominately populated with white, working-class residents.

According to the 1900 Census, the wards representing Fettersville and Kaighnsville were about a quarter African American. For a city in which African Americans only comprised 8% of the total population, clearly, blacks were not evenly spread across the city. But, the extent and scale of black segregation would increase dramatically by 1940. By 1940, the share of black

[12] http://www.cherryhill-nj.com/Facilities
[13] http://ecode360.com/8508679

residents had increased to 11%, but this growth in the black population was concentrated geographically in the central and southern parts of town. Figure 1 shows that by 1940, the black concentration in parts of Camden exceeded 50%.

Figure 1: Segregation in Camden, 1940



The creation of Camden's segregated neighborhoods echoed the creation of segregated neighborhoods throughout the United States. Camden city government used zoning laws, the placement of segregated schools, and public housing to create and enforce residential segregation between whites and Africans Americans, as well as between renters and homeowners. New Jersey's zoning enabling statute specified that regulations "must be made with reasonable

consideration, among other things…with a view of conserving the value of property," (Cunningham 1965). Camden first authorized zoning in 1928 and like other early zoning adopters, moved quickly to ensure that land use policy was used strategically to protect the interests of white home-owning residents.

By 1930, Camden was a bustling central city. It had more than 118,000 residents and spent nearly $950 (in 2012 dollars) per capita on municipal expenditures – well above the national median. But the stress of the Great Depression left Camden with an enormous burden of vacant and uninhabitable properties (Housing in Camden, 1942)[14]. And, so it was one of the earliest recipients of federal slum clearance and public housing funding in the 1930s (Pommer 1978). In 1938, two buildings were erected – one for whites and one for blacks. When the program was expanded in the 1940s two more projects were built; also segregated. Unsurprisingly, the neighborhoods around each project increasingly came to reflect the race of public housing occupants (Williams 1966a[15]). Later, when Interstate 95 was run through the city, "an attempt [was] made to eliminate the Negro and Puerto Rican ghetto areas" (New Jersey State Attorney General report, quoted in Rose and Mohl 2012, p108).

Overtime, neighborhood segregation in Camden rose; climbing more than 50% in the first half of the 20th Century. As would be the case in cities throughout the United States, Camden's city government underprovided services to its black neighborhoods (Helzner 1968[16], Silvotti 1968[17])

[14] http://www.dvrbs.com/hacc/CamdenNJ-HousingAuthority.htm http://www.dvrbs.com/hacc/CamdenNJ-HousingAuthority.htm
[15] Camden Courier-Post, June 8, 1966
[16] Helzner, Gerald, Camden Courier-Post, March 7 1968, p 13
[17] Silvotti, Bert, Camden Courier-Post, March 18, 1968

Starting around the time of the Second World War, the city faced desegregation pressures on a number of different fronts. In 1881, the state of New Jersey passed a law prohibiting the segregation of schools by race (Wright 1953). But, as of 1944, no black children attended white elementary schools (Jensen 1948). When the NAACP sued the district, officials responded that black parents had simply not requested attendance at their neighborhood schools. So, the NAACP took out ads in the Camden Courier Post to convince parents to do just that. In 1947, hundreds of black children enrolled in previously all-white schools (Wright 1953).

School desegregation was just one of the first of many signs of racial transition in Camden. In 1951, the city witnessed its first biracial contest for city council when Dr. Ulysses S. Wiggins, the president of the Camden NAACP Branch, was nominated on the Republican ticket (Chicago Defender April 21, 1951). He lost, but in 1961, Elijah Perry became the city's first African American city council member (Riordan 1996[18]). In 1954, the New Jersey Supreme Court ordered public housing to be desegregated and the first black families moved into white buildings in 1966 (Williams 1966a, Williams 1966b[19]). And in 1969 and 1971, the city erupted in violent race riots, touched off by police brutality against black and Latino residents.

In 1940, the little hamlet of Cherry Hill had a population just under 6,000 residents; they were 91% white and 9% black.[20] Not only small, the city was economically weak, having defaulted on its bond obligations been placed in receivership by the state government during the Depression (Shay v Delaware 122 N.J.L. 313, 316 (N.J. 1939), Cammarota 2001). But after the war, while housing and schools in Camden were integrating, Cherry Hill's population and economy exploded, as was true of suburbs throughout the nation.

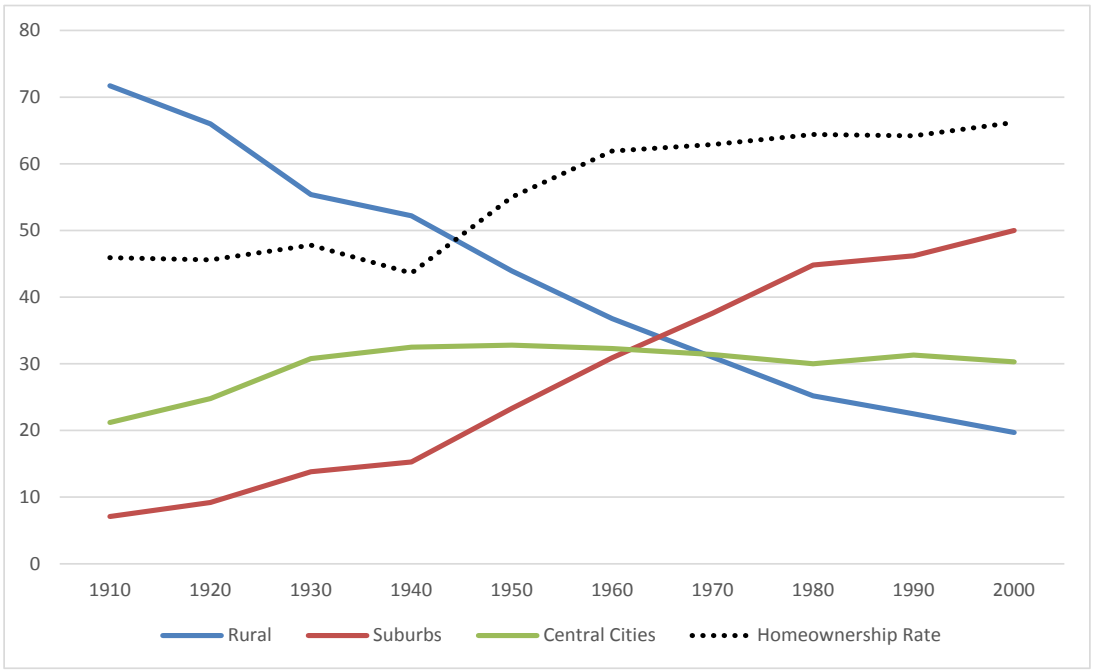
[18] Riordan, Camden Courier Post, February 2, 4B
[19] Camden Courier-Post, June 9, 1966, p17
[20] http://lwd.dol.state.nj.us/labor/lpa/census/2kpub/njsdcp3.pdf; Camden Historical Society scan****

Drawn to places like Cherry Hill by the attractiveness of low-cost federally insured mortgages, the development of new homes and new employment opportunities in outlying communities, and easy commuting along newly built federal highways, the nation suburbanized and white homebuyers moved to the periphery (Jackson 1985). After the war, Cherry Hill witnessed a tenfold increase in 30 years. During the same period, Camden lost 13% of its residents.

Figure 2 shows the share of the total population living in rural areas, central cities, and suburbs over the 20th century. The graph reveals that the pace of suburbanization increased sharply during the postwar period so that by 1970, a plurality of the population lived in suburbs.[21] The homeownership rate increased at the same time. This latter fact is important because it helps to explain the driving force behind exclusionary zoning adopted by suburban communities.

[21] Rural here refers to population outside of any metropolitan area. A suburb is an area inside of a metropolitan area, but outside of the central city. City refers to the central cities of metro areas. https://www.census.gov/prod/2002pubs/censr-4.pdf p33; https://www.census.gov/hhes/www/housing/census/historic/owner.html

Figure 2: Share of Total U.S. Population Living in Different Types of Places

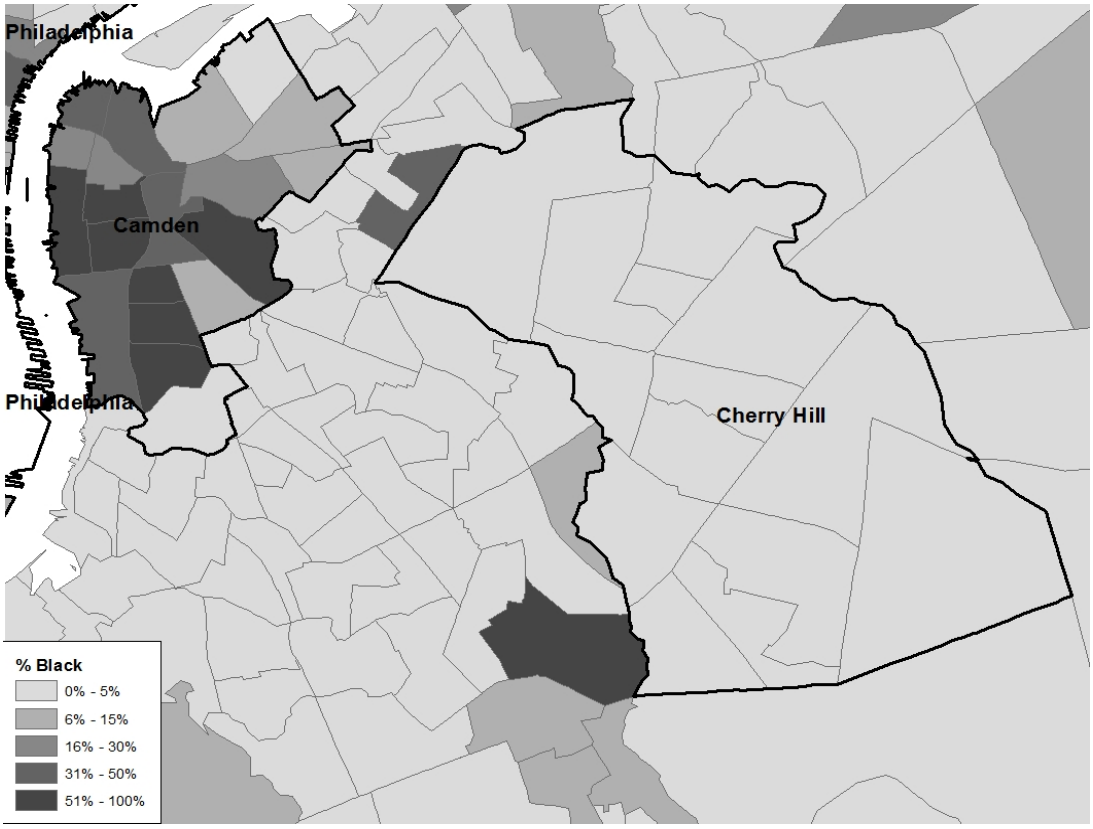


As Camden rushed to utilize more than $30 million in federal redevelopment funds to revitalize its flagging urban center, Cherry Hill was busy implementing zoning restrictions that effectively prohibited the development of low-or even moderate-income housing (Cammarota 2001). In 1975, black residents of Mount Laurel, New Jersey (a suburb close to Cherry Hill both geographically and demographically) along with several local chapters of the National Association for the Advancement of Colored People (NAACP), won a class action lawsuit challenging Cherry Hill's type of exclusionary zoning. As a direct result of this decision, Cherry Hill was required by the state to zone for thousands of low-income housing units. The city declined to do so. As of 2015, Cherry Hill continued to face litigation for its failure to zone for

affordable housing.[22] As is true in many places throughout the United States, exclusionary economic zoning cannot be disentangled from race. One activist argued "many residents carried racist feelings about affordable housing, fearing it would attract poor blacks and Hispanics."[23]

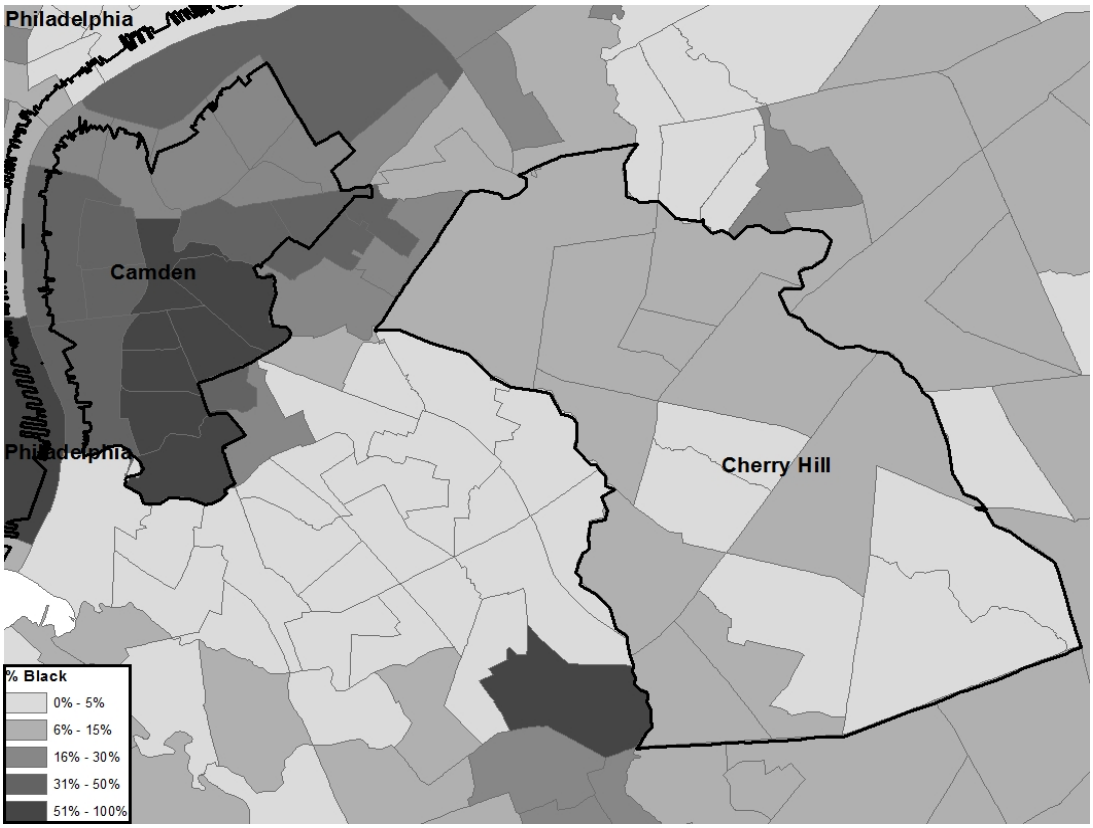
Figures 3 and 4 reveal how segregation between Camden and Cherry Hill changed between 1970 and 2010.

Figure 3: Segregation in Camden and Cherry Hill, 1970



[22] http://www.cherryhill-nj.com/DocumentCenter/View/2562, page 8;
[23] http://articles.philly.com/1989-09-10/news/26101167_1_bloat-prosperity-sewers-and-roads

Figure 4: Segregation in Camden and Cherry Hill, 2010



In 1960 Camden was 76% white; and the maps show that in 1970, although home to many more people of color than was true in 1940, Camden still had several exclusive white neighborhoods. These white neighborhoods had all completely disappeared by 2010. So, even though Cherry Hill diversified to a limited extent, a greater share of segregation occurs between these cities than within them.

Those who left Camden during the postwar period and those who moved to Cherry Hill were largely white, middle-and upper-class. As of 2014, about 39% of Camden's population owned their homes, 5% were white, and the annual median household income was $26,000. In Cherry Hill, 80% owned their homes, 75% were white, and the median household income was

$89,500.[24] In 2012, per capita taxes in Cherry Hill were double Camden's. Camden simply cannot afford to offer the services that Cherry Hill provides. The segregation along race and class lines between these two cities, and the resulting inequality in access to public goods was produced by public policy. It is a pattern that was replicated many times over throughout the United States; a postwar version of similar patterns that had developed at the turn of the 20th century.

A Theory of Segregation by Design

In the late 1800s as industrialization brought thousands of migrants and immigrants into cities, people of color and the poor were spatially isolated, not by ward or census tract, but by building and street (Logan et al 2015). What this means is that although blacks, Latinos, and Chinese residents were unlikely to live next door to white homeowners, they *were* quite likely to live down the street. By 1940, segregation shifted up to the neighborhood level (Cutler et al, Massey and Denton), so that large swaths of many cities had become predominately black or white, and both poor and wealthy residents became increasingly clustered in most places. By the onset of the Second World War, every large city in America had parts of town where people of color lived, and parts of town where the poor lived. Sometimes, but not always, these neighborhoods overlapped. Race and class segregation both increased by more than 50% between 1900 and 1940. These concentrating trends continued at a slower pace throughout the postwar period until 1970, when both race and class neighborhood segregation peaked. Neighborhood segregation by race has declined since 1970, but segregation by class has

[24] http://www.census.gov/quickfacts/table/PST045215/3410000,3400712280,00

increased.[25] During the post-war period segregation between cities increased and has remained stable since that time (Massey and Hajnal 1995, Farrell 2008, Fischer et al 2004).

Two classic economic models of individual choice appear to predict these different patterns of segregation. Thomas Schelling (1971) argued that extreme racial segregation could result from individual decisions about where to live, given even mild preferences for having neighbors of the same race. Only a small number of racially intolerant white residents can cause a neighborhood to rapidly transition because as each intolerant white resident is replaced with a black neighbor, whites with lower and lower levels of intolerance choose to leave, creating neighborhood-to-neighborhood segregation. The second individual choice model predicts city-to-city segregation. Charles Tiebout (1956) proposed that residents with similar preferences for taxation and public goods provision should sort themselves into cities with like-minded neighbors. To the extent that heterogenous preferences for tax and spending levels (or ability to pay) overlap with heterogenous demographics, they will also generate segregation.[26]

The trouble is that both theories are subject to instability in the absence of collective enforcement mechanisms (Oates 1969, Oates 1981, Fischel 1992). That is, for an individual to ensure that her neighborhood remains white and has access to a nice public park, she needs the cooperation of her neighbors. But, neighbors may have individual incentives that undermine the achievement of other residents' collective goals. For instance, it can be extremely lucrative for a white homeowner to sell her home to a black buyer. This is especially likely to be the case when black housing options are restricted and when the black population is expanding. As Hamilton

[25] The precise pattern of class segregation depends on the measures used to indicate class. Income segregation has increased significantly since the 1970s (although remains lower than racial segregation), while homeowner/renter segregation has increased by a smaller amount.

[26] Banzhaf and Walsh combine Schelling and Tiebout's insights into a single model that establishes that preferences over public goods and demographics are mutually reinforcing in the generation of segregation (2010).

(1975) explained, individual incentives can also undermine the Tiebout model. It also makes fiscal sense for a resident who prefers high quality public goods, but is unable to afford high tax rates, to locate the smallest, least expensive home in a wealthy city. The taxes this resident pays do not support the share of the public goods she utilizes, but she benefits from them nonetheless. In Hamilton's tale, this behavior could lead to wealthy residents chasing each other around to try and maintain exclusivity. In the first instance, the collective goal of maintaining the white neighborhood is undermined by sellers seeking the highest sale price. In the second instance, the provision of public goods is undermined by residents who do not pay the full cost.

Governments can promote collective action by generating enforcement of collective goals; and here it is *local* governments that play the starring role, because they alone regulate land-use. By invoking their powers of control over land-use and making choices about service provision, local governments can affect the aggregate demographic makeup of communities and the spatial distribution of residents and services, thereby generating and enforcing segregation. The goal of these policy choices is stability (or enhancement) of property values and the protection of public goods quality.

As North (1990) explains, the relative bargaining strength of different interests in any community will dictate the structure of its rules. Such rules, he tells us, are frequently devised in to promote private rather than public interests (p48). The history of local land-use planning and service provision fits squarely within this theoretical perspective. Property owners (and those who derive their livelihood from property, like realtors and lenders)[27], seek both property value appreciation and protection from losses in value. Because tax levels, service quality, and

[27] Developers, while also obviously earning their livelihood through property only sometimes have goals that are aligned with homeowners'. In some settings, developers prefer fewer regulations on development (allowing them to build smaller homes on smaller lots or denser multifamily structures, for example), but in others they are strong proponents of restrictive mechanisms like large lot zoning and racial covenants.

neighborhood demographics are capitalized in property values (see Hilber 2011 for a review), property owners invest considerable energy into dictating local policy (Fischel 2001, Stone 1989; Logan and Molotch 1978).

In the United States, property owners have always been disproportionately white; and property value has been tied to the race of occupants and neighbors (Hayward 2013, Freund 2007). Furthermore, as Bradford, Malt, and Oates (1969) argued, the quality of many public goods, like education and public safety, is predominantly affected by the characteristics of the residents themselves rather than inputs from the government. Together these circumstances have given property owners a powerful incentive to regulate who lives where since the very earliest years of urbanization. In particular, white property owners have long been concerned with excluding certain types of people from their communities.

From the earliest years of city development, white, native-born Americans had a racialized, classist understanding of property value and deservingness of public benefits. In particular, it was widely accepted that poor and minority neighbors negatively impacted property values and were less deserving of benefits than property owners and whites. Local policies like zoning and redevelopment serve these ends, and the result has been segregation along race and class lines.

The very first laws generating segregation were adopted in the first decade of the 20th century, to protect both property values and public goods exclusivity. Over the course of the next 100 years, when property owners were stymied in their attempts to create exclusivity by demographic shifts, loss of political control, or meddlesome higher levels of government seeking to promote equality, they adopted new strategies to achieve segregation, often increasing the spatial scale of exclusivity to achieve their goals. For instance, when first industrialization and

then the explosion of war time economies pulled great numbers of working class people of color to cities, many black and Latino neighborhoods swelled, threatening to spill into white, home-owner communities. City governments were called upon to use policy levers like land use regulations, zoning, the placement of thoroughfares and public housing to consolidate, and then circumscribe minority communities. When state and federal courts ordered desegregation of communal spaces like parks, golf courses, and swimming pools, local governments again used control over land use to alter the residential map. In the post-war period, big city governments became unreliable allies in this pursuit. When the federal court ordered desegregation of schools and when white owners saw threats to their political power in central cities, they ensured that suburban governments protected their interests.

The Geography of Inequality

Political geography is comprised of nested units: neighborhoods within wards, wards within cities, cities within states, and states within the nation. When residential segregation maps onto political geography, political divisions become fused with race and class divisions. This has two important consequences. First, segregation generates inequalities between race and class groups because in a world of scarce resources, the politically powerful deny public goods to those who are politically weak. Segregation within cities and suburbanization across city lines has meant that the benefits experienced by racial and ethnic minorities and low-income individuals are inferior to the benefits experienced by whites and the wealthy. Second, segregation generates political polarization between race and class groups and ultimately, inhibits cooperation.

Segregation generates inequalities because it allows political elites to target public goods toward supporters. At one time, public goods were segregated directly, through laws which

dictated that whites and blacks (and often Native Americans, Latinos, and Asians) could not attend the same schools, sit in the same area on public transportation, utilize the same parks, pools, libraries, or hospitals, be incarcerated in the same facility, or be buried in the same public cemeteries.[28] The legal segregation of public goods allowed city, county, and state governments to provide unequal funding for black and white schools, black and white hospitals, and black and white playgrounds (thereby generating unequal quality). This meant that compared to whites, blacks received inferior public goods than whites regardless of where they lived. But by the middle of the 20th century, public goods inequalities had largely come to be determined by residential segregation instead of directly. [29]

This transformation occurred in part as a response to the 1896 decision *Plessy v. Ferguson* which dictated equality in separate facilities. It was cumbersome and expensive to develop separate and equal services in diverse communities. The duplication of schools, parks, hospitals and cemeteries for black (Asian, Latino, and Native American) and white residents meant higher expenses (CQ Researcher 1947).[30] Such costs arose not only from the establishment of facilities that would not have been needed if the facilities were integrated, but also from the loss of efficiency that the replication of equipment and personnel entailed.[31] Obviously, these costs were minimized when nonwhite facilities were severely underfunded

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[28] Jim Crow laws demanded or permitted segregation in settings far beyond the reach of public goods including everything from seating in theaters and circuses, to marriage and sex, to the playing of checkers or dominos in private homes (Woodward 1955). Furthermore, laws mandating segregation were but one way in which the rights of racial and ethnic minorities were violated during this period. For instance, various laws barred minority individuals from testifying on juries against white defendants, denied them citizenship status, prohibited their access to certain professions, excluded them from owning land, and of course, prevented them from voting.

[29] The choice between segregating public goods directly and segregating public goods via residential segregation was not confined to the South. Leon Litwack (1961) writes of the antebellum north "legal and extralegal discrimination restricted Northern Negroes in virtually every phase of existence," (p64). More details on Jim Crow segregation in the north are provided in Chapter 3.

[30] http://library.cqpress.com/cqresearcher/document.php?id=cqresrre1947110700

[31] One study of St Louis's segregated school system found that 75% of the city's transportation costs in 1951-52 were spent transporting Negro school children who lived in outlying areas to colored schools in the center of the city (Russell 1954).

(Myrdal 1944, p342), but in the wake of *Plessy v. Ferguson* and successive lawsuits urging cities toward equal (albeit separate) facilities, residential segregation became an attractive alternative. After the many midcentury court decisions striking down any separate facilities (e.g. Brown v. Board of Education), residential segregation became the only remaining option (CQ Researcher 1947, Kruse 2005). In addition to being constitutional, residential segregation was also an efficient mechanism for producing inequalities across multiple public goods at once.

A similar transformation occurred in the post-war period, as neighborhood level segregation was traded for city level segregation. In 1948, when the Supreme Court ruled restrictive covenants unenforceable in *Shelley v. Kraemer*, white neighborhoods lost one of their most effective means of defense against integration. The 1968 Fair Housing Act further limited white collective action. As technological changes enhanced suburban service delivery and commute possibilities, and as the federal government subsidized homeownership outside of the central city, segregation across city lines rose. Moving outside of city boundaries allowed suburbanites to provide high levels of public goods for their residents without having to pay for services for nonresidents. For the privileged, suburbanization was an even more efficient mechanism of segregation than choosing separate neighborhoods within the city. As Hayward (2009) has argued, suburbs offered the opportunity to, "engage in exclusionary zoning practices…to opt out of supporting public housing…and even opt out of supporting public transportation within the boundaries of their municipalities," all while allowing suburbanites to, "pool their tax monies…to provide schooling and other public services." (p149). In addition to offering efficiency, suburbanization also freed residents from having to fight for control of the city government. Indeed, suburban flight was encouraged by a loss of political power in the central city.

In many ways, these inequalities in access to public goods are precisely the goal of segregation's promoters. But, a second consequence of increasing correspondence between political geography and demographic division, is an increase in political polarization. Within cities, segregation generates stark divides between racial groups, leading segregated cities to underprovide public goods. But, even beyond city borders, segregation is consequential. The process of building and defending white homeowner neighborhoods created new ideological commitments to a meritocratic discourse that depicted inequalities as being the result of the free-market, and choices made by black and poor residents, rather than the result of actions taken by government or white homeowners. The new ideology that was bred in defended white homeowner neighborhoods took root, growing into a modern conservatism that prioritized protection of property, self-reliance, and individual achievement (Self 2003, Lassiter 2006, Kruse 2005). Over the years, this conservatism has persisted, inculcating new neighbors with the same perspective.

Empirical Expectations

The preceding argument generates several broad predictions which I test in various ways throughout the coming chapters. First, I predict that some communities will be more likely to desire segregation than others: these are places that have a taste for segregation and/or have significant resources to protect. These places will be most likely to implement local policies like zoning, urban renewal, and restrictive land use regulations. When communities seeking segregation are thwarted in their ability to generate exclusivity, they'll seek to change the spatial scale of segregation – moving to exclusive neighborhoods and exclusive cities. Second, I predict that these local policies work to generate segregation along race and class lines. Third, I predict that residential segregation generates inequalities in access to public goods. Finally, I propose

that residential segregation will cause political polarization in both local and national politics. No chapter or time period contains tests of all of these predictions; but together they tell a compelling story. For more than 100 years property owners (and those who derive their livelihood from property) have urged local governments to enact policies that institutionalize segregation along race and class lines to protect their property values and control the distribution of public goods; and I show that they have been incredibly successful.

I find that segregation along both race and class lines has been promoted by white homeowners and land oriented businesses for more than 100 years. Where these interests dominated city government, segregation grew more rapidly. I also find that as segregation increased, service investment in white homeowner neighborhoods increased. As whites lost control over the distribution of benefits, they moved to the suburbs and continued to expand service delivery. Today, a greater share of public dollars is spent by suburbs than by central cities. Finally, I reveal that in more segregated places political polarization is greater and poor and minority residents have access to lower quality public goods.

Important Caveats

Schools (or lack thereof)

This is a book about segregation, and only rarely do I engage a discussion of schools. This will seem a glaring omission to many readers, especially because many pieces of my argument overlap with accounts offered by education scholars. The literature exploring inequality of educational opportunities is extremely dense and well developed (see Reardon and Owens 2014 for an overview). As Stephen Macedo writes, "Local control, when combined with local funding, and district-based assignment of pupils to schools, has created a geography marked by stark inequalities centered on class and race: a new form of separate and unequal"

(Macedo 2003, p743 in "School Reform and Equal Opportunity in America's Geography of Inequality"). The arguments that I advance here compliment and underscore much of this research. One might view this book as an extension of these arguments to the provision of *all non-school local public goods*.

My focus here is on the various policies that local governments use to generate segregation; and the consequences of segregation for local and national politics. The vast majority of the governments that I study do not play a direct role in the governance of schools or the provision of public education. That is, most cities in the United States do not spend money on educational services; and most public school students (about 85%) attend schools that are governed by school districts not municipalities. One could approach school district politics as I have done for municipalities – analyzing decisions about the drawing of catchment zones, policies on bussing, and the allocation of resources across schools in the same district. But, this would require vastly different data than what I have gathered.

That said, school enrollment and quality plays a major role in individual decisions about where to live. So while I do not analyze the politics of school districts, my argument attempts to take school dynamics into account when analyzing the impetus for segregation. For instance, I use federal desegregation orders to study how segregation changed in the post-war period.

Data Hurdles

The data that I use to reveal the patterns described above differs in important ways from previous research. Most scholars who analyze the determinants of segregation focus either on metropolitan level segregation (e.g. Dreier et al 2004, Jackson 1985) or neighborhood segregation (e.g. Massey and Denton 1993)[32]; and on racial segregation (e.g. Charles 2003) or

[32] M.J. Fischer (2008), Reardon, Yun and Eitle (2000), C.S. Fischer et al (2004), and Rhode and Strumpf (2003) are notable exceptions. However, none of these authors analyze the political causes or consequences of segregation.

class segregation (e.g. Bischoff and Reardon 2013) – but these types of sorting are intricately linked. Class segregation and racial segregation are correlated, but they are not identical. Determining both the causes and consequences of segregation requires taking these linkages into account. The data that I have collected measure segregation both within and across cities, they account for both race and class divisions, and cover city expenditures on a wide range of services during the entire 20th century. This required the encoding of archival data, the generation of new spatial data using GIS, and the compilation of thousands of digitized observations from the United States Census. The comprehensiveness of the data allows for a more complete picture of the patterns of segregation over time and allows for an analysis of the factors that give rise to this variation.

I find generally, that I am better able to explain the causes and consequences of racial segregation. In part this is because the data for measuring racial segregation are available for a longer time series and at a finer grain of detail than the data for measuring class segregation. But, the historical record is also clear that exclusion of other races has been a more powerful driver of these processes than exclusion of the poor. This is evidenced by the fact that many neighborhoods contain a mixture of homeowners and renters, as well as varied income levels, even when they are dominated by a single racial group. As a result, racial segregation has always been higher than class segregation. However, today, local policies that generate class based exclusion are generally upheld by courts, while race based exclusion is not. Additionally, income inequality has increased in recent decades. As a result, class segregation has risen and will likely continue to rise, even while racial segregation declines.

Throughout my empirical analyses I face profound causal challenges. In some cases my analysis is plagued by reverse causality: do white residents move to the suburbs because the

central city elected a black mayor, or did the moving of white residents make it possible for a black mayor to get elected? In other cases, my analysis suffers from an inability to disentangle selection from treatment: does living in a homogenous white neighborhood make people more conservative or do people with conservative views move to homogenous neighborhoods? In still other cases, my argument would be aided by evidence of strategy on the part of local elites, but none exists: zoning generates greater segregation, but could this have been an unintended consequence?

In each chapter I describe the hurdles presented by the (lack of) data and my strategies for overcoming them. Generally, I seek to build a case for my argument using both detailed qualitative evidence and quantitative evidence from hundreds or even thousands of places. I often draw on the timing of events for evidence of causality and, where I am able I utilize instrumental variables to underscore my findings.

Contributions to Existing Literature

This book contributes to a number of dense literatures including work focused on segregation, public goods, attitudes toward outgroups, and political inequality. Although a great deal has been written on each of these topics, very little research engages more than one of these areas. For instance, Tiebout's (1956) seminal article arguing that consumer-voters pick communities which best satisfy their preferences for public goods ignores the role of race, segregation, and inequality in these choices and is silent about the ways in which public goods packages are developed. Other scholars (Alesina et al 1998) show that diversity drives down collective investment in public goods, but do not consider the ways that geo-spatial arrangements might affect this relationship. Still others have shown that whites' desire for homogeneity has played a role in generating racial segregation between cities and school districts (Reber 2005,

Baum-Snow and Lutz 2011, Boustan 2010). However, these works largely ignore the political mechanisms by which such preferences are realized (e.g. the development of zoning policies).[33]

Outside of (excellent) case studies focused on one to two metropolitan areas at a time (Danielson 1976, Hirsch 1983, Sugrue 1996, Kruse 2005, Lassiter 2006, Kraus 2000), to date most of the research analyzing the relationship between segregation and public policy has focused on national level programs like the Federal Housing Administration underwriting guidelines (Jackson 1985) or the Home Owners Loan Corporation neighborhood investment ratings (Hillier 2005).[34] With such far reaching effects, the focus on these programs has been well placed, but has tended to obscure considerable subnational variation; and while the case studies offer invaluable historical detail, they are unable to provide evidence of broader patterns of the effect of local policies on segregation. In short, while scholars have documented changing patterns in racial and class segregation, they have not demonstrated the ongoing role of city politics and local service policy in creating segregation and growing inequality. I show how patterns of local service delivery, zoning laws, and other local policies not only mirrored patterns of segregation but also very much drove them – not only in the pre-civil rights era, but also in recent decades.

Although many scholars have suggested that segregation across neighborhoods or between cities and suburbs fosters inequalities in access to public goods (Massey and Denton

[33] Baum-Snow and Lutz analyze the effect of school district desegregation orders on suburbanization. So, while they focus on the effect of a public policy, they are not concerned with policies that intentionally aided segregationist preferences.

[34] Important exceptions include Rothwell (2011) who analyzes the effect of low density zoning on metropolitan area racial segregation and Dreier et al (2004) who suggest (although they do not provide direct evidence) that zoning and redevelopment affect economic segregation across cities. Cutler, Glaeser, and Vigdor (1999) find support for a theory of "collective action racism" prior to 1970. They show that housing prices for equivalent quality housing were higher for blacks than for whites implying that whites acted collectively to limit black housing choices. However, the authors do not provide any analysis of the types of collective action in which whites engaged beyond speculating that restrictive covenants and racial zoning may have played a role. Importantly, Cutler et al do not distinguish between collective actions that occur in the public versus private realm.

1993, Burns 1994, Dreier et al 2004), very little research offers systematic evidence of this intuition.[35] Other scholars have carefully documented the pernicious effects of segregation on individual level outcomes (Ananat 2011, Cutler and Glaeser 1997), but have not offered a direct link between these outcomes and allocation of public goods. I offer quantitative and qualitative data showing that segregation across both neighborhoods and cities allows governments to disinvest in poor and minority communities and this produces unequal access to public goods. These results help to explain why social mobility is tied to place, as scholars like Sharkey (2013) and Sampson (2012) find, and demonstrate the consequences of public policy and segregation for larger patterns of inequality.

Much of the work investigating the determinants of segregation (both within cities across neighborhoods, and within regions across cities and suburbs) argues or assumes that the important driver of racial segregation is prejudice – that is, attitudinal predispositions toward racial and ethnic minority groups. This is an insufficient account. It is insufficient first because racial segregation has not declined as precipitously as one would predict given dramatic changes in overt expressions of racism. I argue that the institutionalization of prejudice through local public policy makes segregation more rigid. Second, pure prejudice does little to explain the rise of class segregation. I argue that if we understand segregation as a mechanism to protect public goods and property values, increasing class segregation is predictable. Finally, a pure prejudice account leaves unexplored the basis for these predispositions. I argue that beliefs about the acceptability of different demographic groups as neighbors (e.g. what we might take to be pure

[35] An important exception is Troesken (2001) who provides direct evidence of the relationship between segregation and public goods inequalities. He shows that cities with racial segregation were more likely to generate unequal access to municipal water and sewer connections in the late 19th and early 20th centuries.

prejudice) were influenced by the distributions of public goods and battles over those distributions decades ago.

Contrary to some scholars' conclusion that the core problems of segregation have been alleviated, I show that segregation persists, that segregation has grown across cities, and that government policies continue to play a central role in perpetuating segregation.[36] White, wealthy Americans are still trying to segregate themselves. And local governments still tend to invest more toward whites and the wealthy. I build this argument through seven substantive chapters and a conclusion that considers omissions from the book and forecasts the path forward.

Chapter Summaries

In order to orient the study, in Chapter 1, I provide descriptive information regarding changes in segregation and public goods spending over the course of the 20th century. I offer an overview of patterns that will be linked through the chapters that follow. I begin by providing a broad overview of spending between 1900 and 1940. It reveals that cities increased expenditures on street paving and lighting, refuse collection, sewers, libraries, health, education, public safety, and recreation, and increased revenue from taxes. During this early period, cities became modern service providers.

Next, I explore early patterns of race and class segregation. I show that racial segregation increased dramatically between 1890 and 1940 while class segregation increased marginally. It was in the cities with the largest budgets that segregation increased the most. Then, I turn to analyzing fiscal and segregation patterns between 1970 and 2011. I argue that during this period, white property owners turned to suburbanization as their primary mechanism for protecting

[36] Several recent headlines make this claim "Glimpses of a Ghetto-Free Future," "Segregation Continues to Decline in Most U.S. Cities, Census Figures Show," "The End of the Segregated Century: Racial Separation in America's Neighborhoods, 1890-2010."

property values. After 1970 the dominant trend in both race and class segregation was increasing differentiation between cities. During this period, suburban governments grew more intensely than central cities so that by 2011, central cities accounted for a smaller share of total metro area spending than they had in 1970.

In Chapter 2, I provide the first piece of evidence directly linking the patterns described in Chapter 1 by showing that public goods considerations drove efforts to segregate in the early decades of the 20th century. Acting in response to white homeowners and land-oriented businesses, local government policy explicitly sought to exclude people of color from white neighborhoods and poor individuals from wealthy neighborhoods. In empirical analyses I analyze the factors that encouraged the adoption of zoning laws and the role that zoning laws played in the development of race and class segregation. I find that exclusion was most adamantly pursued in cities that had become significant providers of public goods, where property taxes were high (and so, raising property values was attractive), and where political support for Progressive reform was strongest. I supplement this analysis with qualitative evidence that reveals the many factors local governments utilized to promote segregation, including strategies like the siting of segregated public goods such as parks and schools. Finally, this chapter reveals that zoning laws had their intended effect: early zoning adopters segregated more rapidly over the next several decades compared to cities without similar ordinances and zoned cities witnessed greater inequalities in housing values.

Chapter 3 documents the unequal provision of public goods that early segregation allowed. Using historical case study evidence, I show that poor and minority neighborhoods consistently received worse public amenities like road paving, and health clinics. I draw on detailed ward level data from Baltimore, Boston, Chicago, and Philadelphia to show that sewer

extensions were less likely to be built in neighborhoods with higher proportions of African American and renting residents. As a result, inequality in water and sewer access was greater in more segregated places. I show that these inequalities persisted. Using data on all tracts in all cities in the United States, I provide evidence that whites and minorities, and renters and homeowners had differential rates of access to public sewers in more segregated places in 1970, 1980, and 1990. I argue that these inequalities in service provision affected the ways in which white and wealthy residents would come to view poor and minority neighbors. Daria Roithmayr (2014) points out, "we see the strongest evidence of continuing discrimination in housing markets" (p18). This is because the roots of this bias are whites' conscious and subconscious beliefs about the effect of nonwhite and renter neighbors on property values and the quality of public goods – beliefs that were fostered by government choices at the turn of the 20th century.

Chapter 4 provides evidence of municipal policy effects on segregation in the middle of the 20th Century. By 1940, segregation was entrenched, as were the unequal allocations of public goods. But patterns would change in the post war period. In some places segregation along racial lines increased, while in others it had already begun to decline (as it would everywhere after 1970). Class segregation began a slow ascent and then leveled off. As was the case in the first time period analyzed, local public policy played a role in these patterns. I provide evidence that cities that more vigorously implemented urban renewal programs grew more segregated along both race and class lines. I also show that during the 1960s and 70s, in many cities white homeowners lost the political power needed to police the borders of their neighborhoods and control the distribution of public goods. I argue that such changes made suburban living a more attractive option than living in homogenous neighborhoods within cities.

Between 1970 and 2000, the major change in segregation patterns occurred between cities. That is, neighborhoods became more racially integrated within cities, but whole cities became more racially homogenous. Class segregation across cities also increased during this period. Chapter 5 offers an analysis of the role of local political control in generating these changes. Using demographic and finance data from all metropolitan areas in the United States between 1980 and 2000, I show that larger budgets, higher spending on policing, and minority mayoral victories are associated with more segregation across city lines. Where whites maintained control they were less likely to move to the suburbs. Throughout the postwar period cities and suburbs alike moved away from explicitly racial strategies toward class based tactics, such as large lot zoning and limiting multi-family developments, to ensure segregation. I show that more restrictive zoning by suburban cities increased both race and class segregation. As a result, suburban communities made decisions that profoundly affected non-suburban residents while preventing them from participating in the decision making process. In this context, representative government, policy responsiveness, and political equality became hollow concepts.

In Chapters 6 and 7, I focus on the consequences of segregation for modern politics. In Chapter 6, I analyze the consequences of segregation within cities. Quite ironically given early claims that segregation was the best solution to racial discord, I show that segregation is associated with deep race and class divisions that dominate city politics today. Polarization makes cooperation difficult and, I show that segregated cities have smaller city budgets and spend less on individual categories of expenditure such as roads, policing, parks, and sewers. Underinvestment means that city services do not operate well. Focusing on one measurable area

of public goods provision, I demonstrate that sewer overflows are more frequent in segregated cities.

In Chapter 7, I focus on the effects of segregation for national level politics. I draw on case study and large-n evidence to show that the integration of public spaces and residential areas encouraged whites and the wealthy to move to the suburbs during the postwar period, which allowed for more control over political decisions and the distribution of public goods. Then, I draw on restricted-access General Social Survey data geo-coded to 1970 Census tracts to show that residents who live in neighborhoods that were whiter than the metropolitan area as a whole in 1970 are much more conservative than those who live in more integrated places. I argue that this conservatism is rooted in the battles over integration that occurred in earlier decades.

In the conclusion of the book, I pull the many pieces of evidence presented previously into a single framework and discuss what the future holds. I reiterate my main claim: local governments pursue segregation at the behest of politically powerful interests. This allows politicians to target public goods towards some residents and away from others, resulting in differential access to public goods. Segregation generates unequal political outcomes which in turn, reinforces segregation. By linking neighborhood level segregation to suburbanization, I suggest that preferences for separation have changed in form, but not intent over time. Going forward we can expect additional change. Rather than seeking residential segregation, some individuals will choose to leave the public realm altogether – relying more heavily on private provision of services like education, policing, and park space. We have some evidence that privatization has increased even as many cities have become more integrated. The drive to protect property values, ensure good schools for children, and safe streets for families has

remained a powerful force. In the final section of this concluding chapter I consider some potential policy solutions to these seemingly intractable problems. I suggest that the most promising path forward is to utilize lessons from school finance reform (e.g. Lafortune, Rothstein, and Schanzenbach 2015) to guide state governments' approach to producing more equal access to a range of local public goods.

Chapter 1: Segregation and Public Goods over the 20th century

At the turn of the 20th Century, cities in the United States experienced intense demographic change. The first waves of African American migrants left the South for Northern communities, and immigrants from Europe streamed across the borders until the onset of World War I and the implementation of restrictive immigration laws. By the middle of the Century, the spatial distribution of residents was markedly different than it had been 50 years prior; and patterns would change again over the ensuing 50 years. Until the onset of the Great Depression, expenditures by local governments also grew rapidly. It was during this period that the foundation for modern urban politics was laid across the nation. This growth in municipal spending continued unabated for the next 100 years, but it was uneven, favoring suburbs at the expense of cities. This chapter charts and links changes in both demographics and service provision in metropolitan America.

I begin with a presentation of data on the growth of expenditures during the first four decades of the 20th century. I analyze demographic correlates of this growth, showing that homeownership, wealth, diversity, and density were all associated with expanding municipal governments. This, I argue, explains why white homeowners and land-oriented businesses pursued residential segregation: to protect property values and capture public goods. Next, I present the changing patterns of race and class segregation for these early decades. I show that cities with greater spending became more segregated. I then turn to an analysis of spending and segregation between 1970 and 2010, concentrating on the effects of suburbanization. I provide evidence showing that the level at which segregation occurred shifted during this time. While neighborhoods within cities became less segregated, cities started to look increasingly different

from one another. As the next several chapters will reveal, the changing level of segregation has had significant implications for the allocation of resources.

The Rise of Urban America

In the year 1800, only 5% of the population of the United States lived in cities and approximately 90% of the workforce was tied to agriculture. For the next half century, this figure inched modestly upwards, so that by 1850, 15% of population lived in urban areas.[37] After the end of the Civil War, the pace of urbanization (and industrialization) increased dramatically. By 1900, the nation was 40% urban and in 1920, the Census reported a majority urban nation for the first time. This trend continued; today the nation is approximately 80% urban.

As industrialization advanced, massive demographic shifts accompanied the economic changes. Cities began to fill with migrants and immigrants seeking work in the new factories and service sectors. During this period, most workers commuted to their jobs by foot, limiting the distance residential neighborhoods could be located from places of employment. The result was massive overcrowding – in some cities as early as the first decades of the 1800s. Housing and sanitary capacities became overextended; epidemics and conflagrations were rampant. O'Connor (1984) offers a vivid description of early 19th century Boston:

> Within the heart of the old city…things had deteriorated badly over the years…Its meandering streets…were hedged in by four and five-story houses that blocked out the sunlight. Pedestrians were in constant danger of being knocked down by stagecoaches, or bowled over by droves of pigs being hustled to market….[An] abominable stench rose above it all. Not merely the oily fish smells from the docks, the briny tang of salt water, or the sickish odor of the mudflats at low tide. This was the repulsive reek of

[37] The Census determines whether a particular geographical area is urban based on population size and density. Rural territory is any area that is not urban. Starting in 1900, the Census has defined urban areas as all places with at least 2,500 residents. From 1910-1950, urban areas only included incorporated places (e.g. cities) that met the size threshold. In more recent decades, the determination has been a combination of size and density; urban areas contain at least 2,500 people have a density threshold of at least 1,000 people per square mile.

> uncontrolled street refuse and untended garbage. To make matters worse, the city's sewerage system emptied out into the Town Dock… (p80).

Despite the clear benefits of moving away from the center of town, the nature of transportation and the needs of industry meant that even while they grew larger and more diverse, cities in the 1800s experienced low levels of segregation along race and class lines. At this time, the population of urban blacks was heavily concentrated in Southern cities. My dataset includes demographics for 296 cities from the 1900 Census of Population and Housing. These cities housed about 1.2 million black residents; approximately 64% of whom lived in the South. In an early analysis of *The Negro Ghetto* (1948) Robert Weaver explained, "in the cities of the Old South, like Charleston and New Orleans…most of the dwellings occupied by Negroes were either servants' quarters in the rear of the better houses or shacks on streets where low-income groups of whites also lived," (p8). In the north, Weaver says blacks "usually lived in clusters in racially mixed neighborhoods," (p9-10). However, detailed research on New York and Chicago by Logan et al (2015) reveals that although northern blacks did not live in "*predominately* black neighborhoods", they did live in "*disproportionately* black…neighborhoods," (p1062). What this means, is that while neighborhoods were mixed in the aggregate (thereby generating low measures of segregation), the housing available to blacks and other racial minorities in urban areas, was nonetheless heavily restricted from the start. Yet, because political representation is frequently defined at the neighborhood level, with low levels of neighborhood segregation, blacks and other minorities were likely to benefit from public goods provided to white homeowners.

Until about 1930, "state and local governments were *the* governments of most Americans" (McDonald and Ward 1984, p14). This was especially true with respect to fiscal

affairs. To the extent that *any* government would have addressed the negative externalities associated with rapid urbanization, it would have been viewed as the responsibility of the city (and their parent states). Yet, throughout the first half of the 19th century, city governments were fairly limited in scope. The economies of early cities were largely commercial, and a dedication to privatism and the market generally dictated political affairs (Monkkonen 1988, Warner 1968, McDonald 1986). A large and meddlesome government was something to be suspicious of and few cities provided extensive public services. Government was run by (and services were often partially funded by) the wealthy – typically merchants. As Bridges (1984) explains of New York City in 1830s, "it is impossible to determine where government began and noblesse oblige (and the church) ended" (p72).

In most instances, services were handled by volunteers (e.g. fire brigades) or part-time, municipally funded workers (e.g. night watchmen); and while city budgets provided contributions toward these services, city responsibilities were largely focused on regulating access to urban activities (like city markets). But by the end of the 19th century, city governments began to adopt a new orientation toward public goods provision and city leadership began to shift away from wealthy merchants and toward career politicians. As a result, services came to be increasingly funded by city budgets, not charitable contributions. Monkkonen (1988) argues that city goals had been broadened by the 1890s to include:

> Protecting private property (firefighting); suppressing crime; controlling behavior in public areas; building and maintaining streets and sewerage systems; aiding the poor, schooling children and sometimes adults; funding public libraries; providing recreation and entertainment; supporting a minimal level of health; temporarily assisting all persons incapable of caring for themselves…; enforcing public morality; expending direct financial aid to private capital…; and constructing not-for-profit public buildings in which to house these activities (p218).

Historians do not agree on what caused the transition from the regulatory approach of antebellum governments to what Monkkonen calls the "service city" by the late 1800s. Yet, with one exception (Brown and Halaby 1984), scholars have not analyzed this development quantitatively in more than a handful of cities. Simply put, we lack systematic, quantitative knowledge of the factors that affected the development and expansion of city government at the turn of the 20th century when significant variation was present. In 1902, for example, the median per capita expenditure of local governments in cities over the size of 25,000 (n=160) was about $11, but the standard deviation was more than a third of that amount ($4). Some cities spent very little providing services for residents, others, a great deal. If city governments were once limited and weak, why did some choose to begin providing services for residents while others lagged behind?

The dominant paradigm is to understand the growth of city government as the necessary response to the negative externalities of increased population growth and density such as pollution, congestion, conflagration, crime, and disease (see for example Griffith 1927, Still 1948, Glaab and Brown 1967, Chudacoff 1975, Anderson 1977, Troesken 2004). Scholars have generally recognized that the capacity to fund such developments through taxation and debt varied widely across cities (Dilworth 2005, Cutler and Miller 2006, Monkkonen 1988).[38]

Some scholars argue that managing racial and ethnic diversity in growing, compact cities was an essential driver of the development of municipal government. In an analysis of city relief spending in 1929, Cybelle Fox (2012) argues that native-born Americans and social welfare workers sought to Americanize foreign-born populations by drawing them into the reach of government. Tebeau (2003) shows that the development and expansion of fire services was an

[38] Research indicates that prior to the advent of the municipal bond market, cities were largely unable to invest in large infrastructural development.

attempt to confiscate power from ethnic fire brigades, ensuring that firemen would be loyal to the city and not to their group. Similarly, Monkkonen (1988) argues that spending was a mechanism to manage conflict. As cities grew, he says, the bureaucracy of municipal government was invoked to manage conflict and Americanize newcomers as a substitute for small town interactions. In support of this thesis, Brown and Halaby (1984) find a substantial, positive relationship between expenditures and percent foreign born. But contrary to these arguments, Goldin and Katz (2008) show that community *homogeneity* was key in the expansion of free public schooling. A large literature linking diversity and limited public goods provision underscores this finding (Alesina et al. 1999, Poterba 1997, Vigdor 2004, Hopkins 2009, Habyarimana et al. 2007, 2009, Miguel and Gugerty 2005, Miguel 2004, Algan et al. 2011, Fearon and Laitin 1996). This leaves no clear prediction regarding the direction of the relationship between diversity and spending.

Several accounts emphasize demands made by emerging middle-class residents (Yearly 1970), as views regarding what it was the duty of government to provide evolved (Myrdal 1944). McDonald (1986) suggests that property owners in particular wanted good public services which led to high spending through debt. Others highlight the demands of newly minted professionals engaged in the private provision of services, who would benefit from public funding. Teachers pushed for public education; fire fighters pushed for fire forces (Katznelson and Weir 1985, Tebeau 2003). Along these same lines, Monkennen (1988) highlights the growing role of planners, real estate developers, and professional bureaucrats who helped to build the Progressive reform movement (see also Hays 1964, Bridges 1997, Tretter 2012 on Progressivism and growth).

City Spending Data

To provide a description of historical expenditure patterns, I use a new dataset built from a number of government sources that includes data from the turn of the century to the Second World War. Starting from 1902, the Bureau of the Census has been responsible for collecting data on the finances of local governments. With a few exceptions, the data have been collected annually for cities that meet a particular population threshold (which has varied over time). The Federal Reserve Archive (http://fraser.stlouisfed.org/) has digitized copies of the paper Census reports up until the year 1941, and I encoded a series of relevant variables from these digital reports at five year intervals.[39] Thus, I have fiscal data from 1902, 1907, 1912, 1917, 1923,[40] 1927, 1932, and 1937, as well as other governmental data from a number of early special Census reports.[41] I encoded socioeconomic data from the Census of Population and Housing in 1900, 1910, 1920, 1930, and 1940. In order to be able to analyze the diversity of the population, I gathered data on the country of origin for all of the foreign born residents in each city. Details on the coding of foreign born groups are included in the appendix. Linear interpolation was used to create intercensal estimates for all of the socioeconomic variables. In my largest sample, I have a total of 1,397 city-year observations, which includes data from 262 cities.

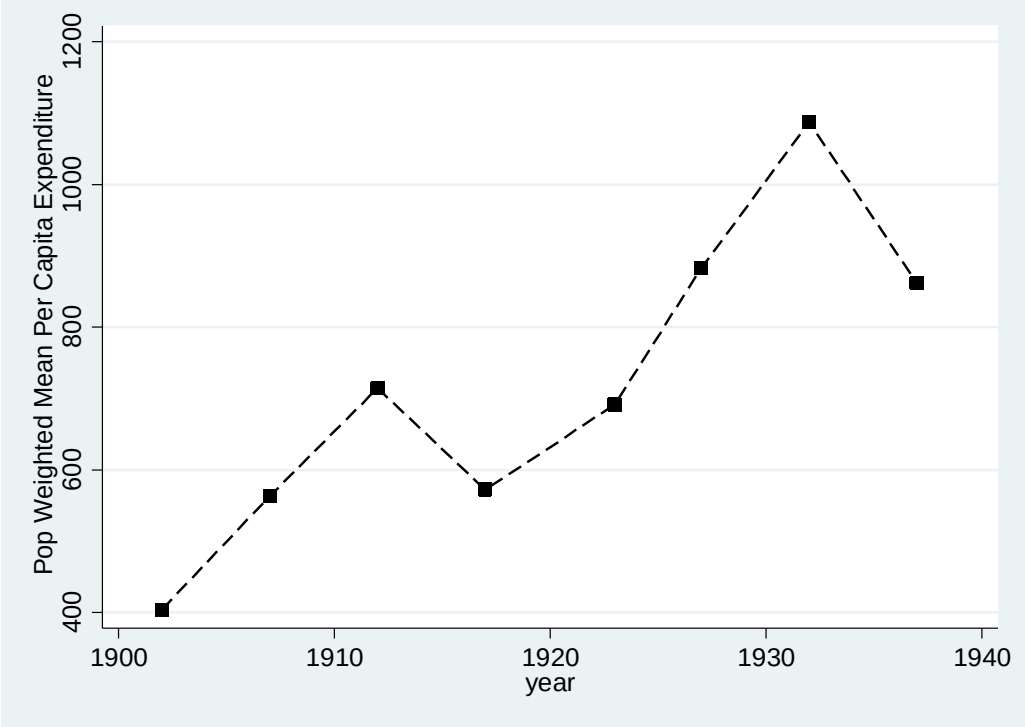
[39] The five year interval was selected to match the interval that the Census of Government used starting in 1952. From 1902-1903, the report was entitled "Statistics of Cities Having a Population of over 25,000." From 1904-1908, it was entitled "Statistics of Cities Having a Population of over 30,000." From 1909-1931, it was entitled "Financial Statistics of Cities Having a Population of over 30,000." From 1932-1941, it was entitled "Financial Statistics of Cities Having a Population of over 100,000." Collection of data on local governments was spotty between 1942 and 1952. The Census resumed regular collection of data at five year intervals starting in 1952.

[40] The report produced in 1922 was limited to very basic data and lacked many of the variables of interest. The 1923 report was used instead.

[41] These include the General Statistics of Cities: 1909: Including Statistics of Sewers and Sewage Disposal, Refuse Collection and Disposal, Street Cleaning, Dust Prevention, Highways, and the General Highway Service of Cities Having a Population of Over 30,000; Municipal Electric Fire-Alarm and Police-Patrol Signaling Systems: 1912; General Statistics of Cities: 1915: Including Statistics of Governmental Organizations, Police Departments, Liquor Traffic, and Municipally Owned Water Supply Systems, in Cities Having a Population of Over 30,000; General Statistics of Cities: 1916: Including Statistics of Parks, Playgrounds, Museums and Art Galleries, Zoological Collections, Music and Entertainments, Swimming Pools and Bathing Beaches, and Other Features of the Recreation Service.

I begin with an analysis of total *Per Capita City Expenditure* as the dependent variable.[42] All data are shown in real (2012) dollars to make comparison to the modern period more straightforward. As Figure 1.1 shows, development of municipal budgets was rapid over this time period. The graph displays the population-weighted mean of per capita total expenditure, plotted against time for all cities that had more than 30,000 residents in 1902. Tables 1.1 and 1.2 show inflation adjusted (but unweighted) mean per capita spending and revenue on various categories over the same time period.

Figure 1.1: Municipal Expenditures Per Capita
In 2012 dollars



[42] This measure includes all general expenses, expenditures on interest, and outlays for the municipal corporation.

Table 1.1: Municipal Budgets in the Early 20th Century
Per capita expenditures in 2012 dollars

year	Expenditure	General Expenditure	Outlays	Revenue	Taxes	Subventions
1902	$313.0		$ 114.2	$425.5	$269.3	$20.6
1907	$409.7	$279.2	$174.0	$418.6	$285.6	$24.4
1912	$562.0	$323.0	$207.9	$541.7	$364.9	$27.3
1917	$456.7	$274.7	$168.0	$408.8	$314.6	$22.1
1923	$587.0	$393.9	$205.2	$491.5	$431.2	$29.2
1927	$700.7	$460.9	$247.3	$586.7	$521.9	$32.2
1932	$868.7	$700.3	$173.3	$807.4	$710.8	$65.0
1937	$670.9	$682.2	$115.5	$704.0	$643.9	$126.9

Table 1.2: Municipal Spending in the Early 20th Century
Per capita expenditures in 2012 dollars

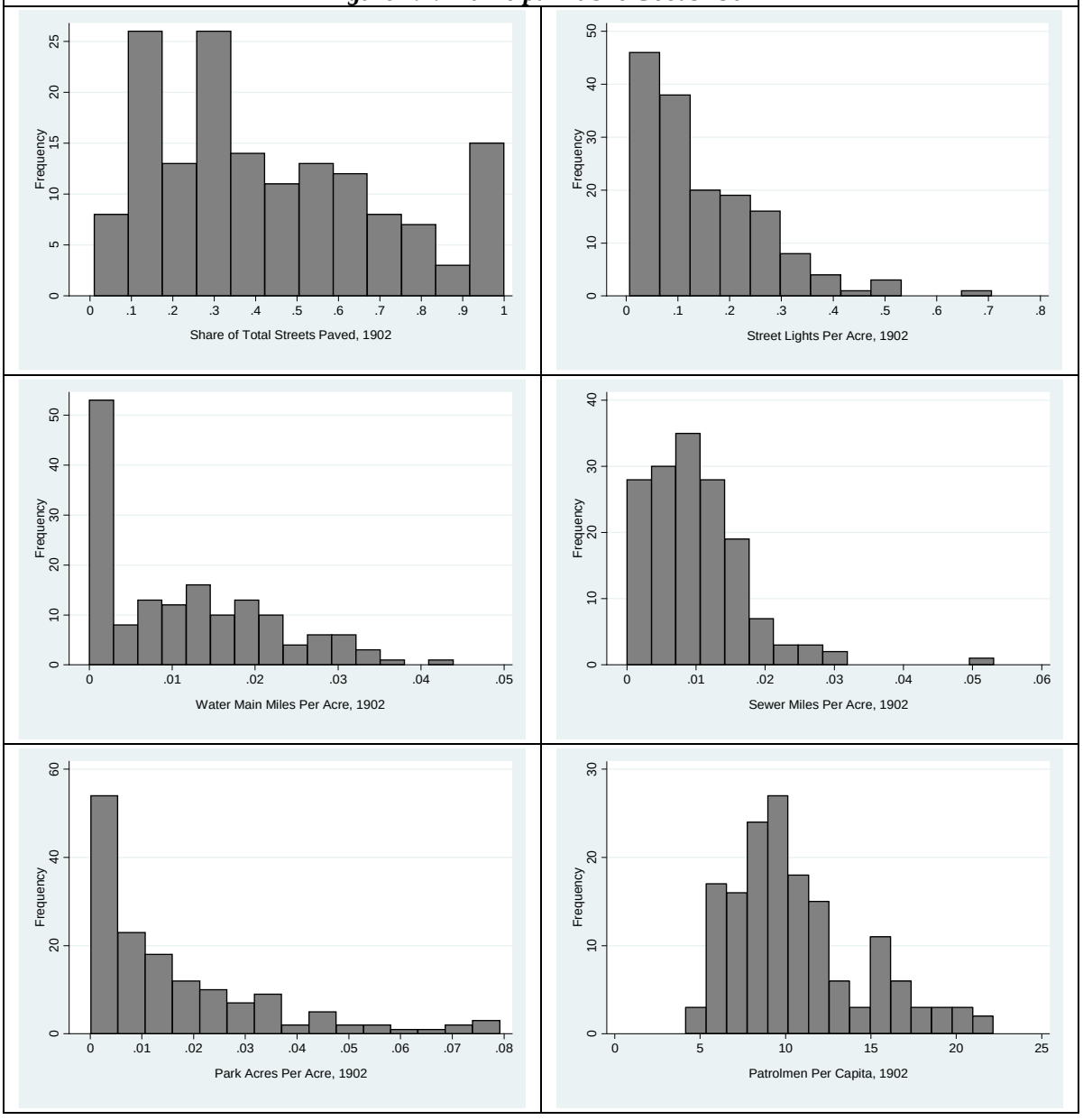
Year	Inspections	Refuse Collection	Sewers	Libraries	Police	Fire	Health	Highways	Recreation	Schools
1902	$1.3	$4.6	$3.7	$3.0	$28.9	$31.1	$4.8	$43.2	$6.5	$84.4
1907	$1.4	$6.7	$4.6	$4.4	$31.4	$35.4	$4.6	$38.7	$7.3	$96.0
1912	$2.2	$19.6	$5.0	$5.1	$33.3	$37.9	$6.2	$42.2	$10.1	$107.7
1917	$1.9	$16.1	$3.8	$4.0	$27.0	$29.2	$6.3	$32.6	$8.9	$97.5
1923	$2.4	$11.9	$5.1	$5.6	$36.1	$39.8	$9.0	$39.0	$11.9	$161.8
1927	$3.0	$14.1	$5.9	$6.7	$43.6	$45.2	$11.2	$43.4	$13.1	$202.3
1932	$3.9	$18.7	$7.7	$10.7	$63.2	$57.2	$17.7	$51.6	$22.3	$257.5
1937	$3.4	$16.1	$7.9	$10.7	$60.3	$53.5	$11.5	$43.4	$21.2	$233.0

The figure and tables reveal that during this period, city expenditures grew across the board. In every category, from sanitation to safety, from health to highways, American cities became modern service providers. Spending slid back during the time of the First World War and the Great Depression, but otherwise followed a steep upward trajectory. Over the next 70 years, growth continued. In 2012, per capita spending was literally 10 times what it had been in 1902. Yet, even at the start of the period, growth was uneven.

Figure 1.2 shows histograms of a number of different public goods that were provided by cities in 1902, including the share of total street miles that were paved, the number of street lights per acre, water main miles per acre, sewer miles per acre, park acres per acre, and

patrolmen per capita. All of the distributions are widely spread. Clearly, significant variation existed.

Figure 1.2: Municipal Public Goods 1902



To analyze the correlates of expenditure, I regress the natural log of inflation adjusted *Expenditures Per Capita* on several variables intended to capture explanations offered in the historical literature. Many scholars have argued that cities responded to pressing needs as they arose. For instance, Glaab and Brown (1967) argue that industrialization and population growth generated demands that were fulfilled by city government. While my dependent variable is measured as per capita spending, it is still possible that large and/or dense cities may have required higher levels of spending (if, for example, fires or diseases were more likely to spread in such places). Monkkonen (1988) argues that the need for social control through bureaucratization was greatest in large cities. Alternatively, large cities may have benefitted from returns to scale, and therefore may have been able to provide services for a lower cost. To test for these possibilities, I include a measure of the *Total Population* (logged) and *Density* (total population divided by total acres).

The analyses also include two different measures of diversity. The first is the share of all residents that were classified as *Nonwhite* by the Census of Population and Housing. During this period, racial categorization was in flux (Roediger 2005) and the determination of race was made by Census takers (Nobles 2000). However, generally speaking, the *Nonwhite* category included Blacks, Asians and Asian Americans, Native Americans, and sometimes Mexican/Latin Americans. Persons of mixed race were typically identified as nonwhite.

The second measure of diversity is a Herfindahl Index:

$$Diversity = 1 - \sum_{f=1}^{F} \pi_f^2$$

where, π_f is the population share of the foreign-born group *f* and F is the total number of foreign-born groups. There were 52 different foreign-born groups recorded by the Census during this

period (listed in the appendix), and the resulting diversity index ranges from a low of 0.23 to 0.94, with a mean of 0.84.[43] This illustrates that the foreign-born population in the United States was extremely diverse.

As explained above, property owners were among the most supportive of investing in new services (McDonald 1986). However, scholars also report a general tendency among the populace to rail against high taxes and profligate spending of city governments in the late 19th and early 20th centuries (Bridges 1984). According to Monkkonen (1988), this belief was particularly pronounced among property owners. To investigate the role of support for spending among owners, I include the proportion of housing units occupied by *Home Owners*. To measure the wealth of the community I include the *Assessed Value* of all property in the city. McDonald (1986) provides compelling evidence that this measure accurately captures the level of economic development in the city – which should correlate positively with ability to fund city services.[44] Finally, to capture the argument that the development of city services was driven by the emerging professional class (including land developers and planners), I add the share of adults employed as *Professionals*.[45] Because I have missing data on a number of variables, I begin with a presentation of the results using only density and population as independent variables. I then add the remaining variables iteratively. Summary statistics for all variables are in appendix Table A1.1.

[43] Making these categories comparable across censuses required some recoding. For instance, in 1930 and 1940, Irish immigrants were separated by Northern and Southern Ireland. I combined these categories to make the data comparable to the 1900, 1910, and 1920 censuses, which included only one category for Ireland.
[44] However, McDonald (1986) finds that when assessed value rose in San Francisco, politicians tended to lower tax rates, perhaps resulting in little difference in expenditure.
[45] The other occupational categories coded by the Census during this period were trade, manufacturing, domestic work, and agriculture. In 1900, the category professionals included actors, architects, artists, clergymen, dentists, electricians, engineers and surveyors, journalists, lawyers, literary and scientific persons, musicians, government officials, physicians, teachers, and other professionals.

These variables are admittedly insufficient to capture all of the important differences across cities during this period. So, rather than attempt to explain variation across cities, I pursue a more modest goal – to describe variation within cities over time. To do so requires that I use a city fixed effects model for the analysis. This strategy overwhelms much of the variation present in the data, but it allows for a more precise estimate of the effect of each of these contextual variables on spending. Table 1.3 presents the results.

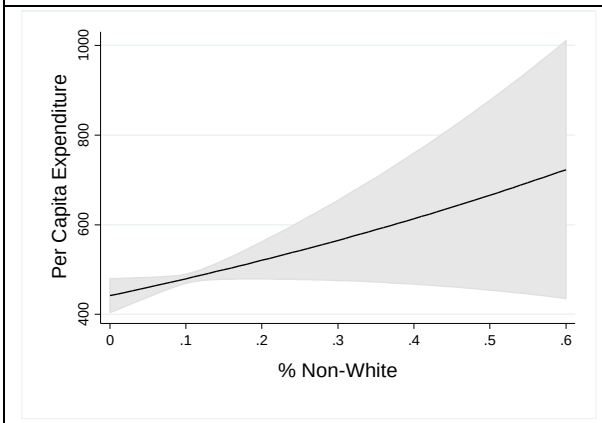
Table 1.3: Factors Affecting City Wide Expenditure

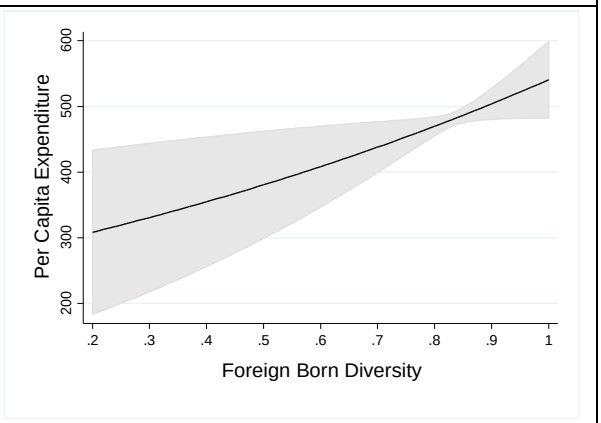
	Logged Per Capita Expenditure								
	β	Std. Err	P>|t|	β	Std. Err	P>|t|	β	Std. Err	P>|t|
Population (log)	0.520	0.037	0.000	0.329	0.047	0.000	0.263	0.051	0.000
Density	0.016	0.004	0.000	0.013	0.004	0.001	0.01	0.004	0.011
% Nonwhite				0.838	0.412	0.042	0.821	0.409	0.045
Foreign Born Diversity				0.893	0.322	0.006	0.702	0.326	0.031
Assessed Value ($100 mill)				0.005	0.003	0.104	0.005	0.003	0.138
% Home Owners				2.672	0.385	0.000	2.030	0.423	0.000
% Professionals							3.197	0.934	0.001
Constant	0.045	0.421	0.961	0.332	0.481	0.49	1.275	0.559	0.023
N	1,397			1051			1040		
Number of Cities	262			173			169		
R^2 within	0.175			0.301			0.315		
R^2 between	0.064			0.077			0.112		
ρ	0.681			0.606			0.567		

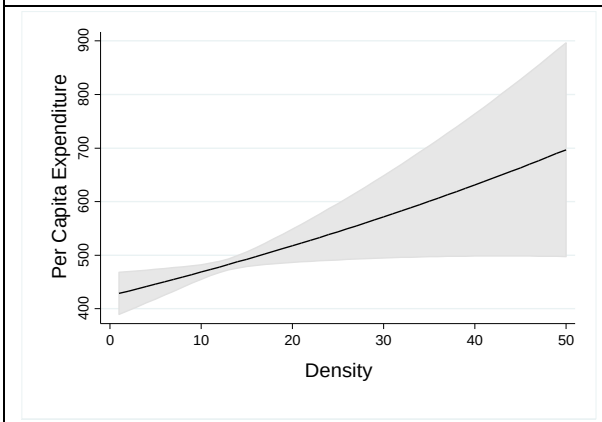
Note: Fixed effect for cities included, but not presented

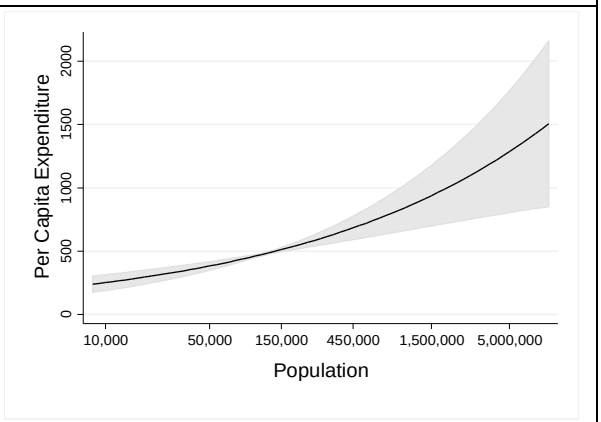
The regression reveals that the factors identified by historical research *do* correlate with expenditures. Cities that were more diverse (either having more nonwhite residents or a diverse foreign-born population from many different places) spent more money. Those places with large, dense populations witnessed higher spending per resident. In an alternate analysis, I add the number of fires per capita that the city experienced in 1902 and 1907. This variable is powerful. Increasing from the 25th to the 75th percentile (from 3 to 5 fires per 1000 people each year), increased spending by $50 per resident. Cities were clearly responding to the negative externalities associated with urbanization. Finally, cities with more capacity and demand (higher property values, more homeowners, and more professionals) also had larger budgets. These results are shown graphically in Figure 1.4. Figures show the marginal effect of each independent variable, holding all other variables at their mean value.

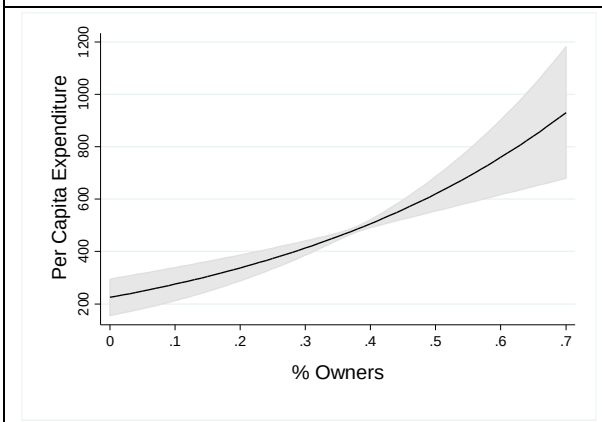
Figure 1.4: Factors Related to Expenditure in Cities, 1902-1937

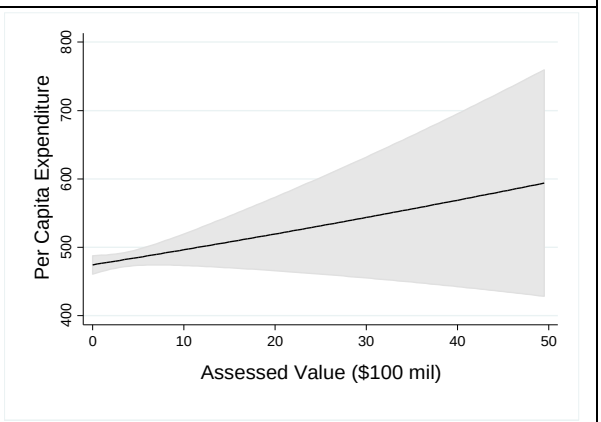


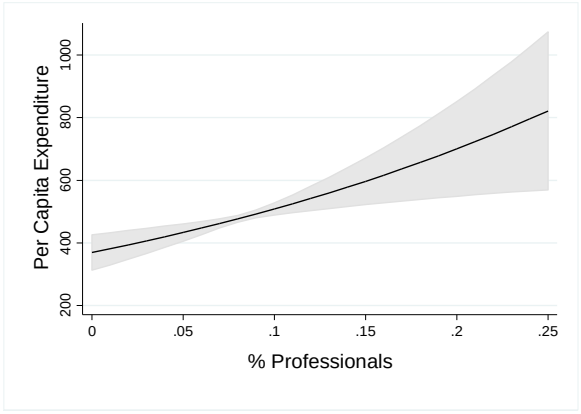












In this book, I argue that white, homeowners sought to institutionalize the residential segregation of poor and minority residents in order to protect their property values and control the distribution of public goods. They were supported in this pursuit by land-oriented businesses. The pattern of relationships presented in Table 1.1 and Figure 1.4 begin to explain this impetus – particularly the positive correlation between property ownership, assessed value, percent professionals, and municipal expenditures. Holding all other variables at their means, a city that was in the 25th percentile of home-owning, assessed value, and professionals (30% owners, $43 million in assessed value, 6% professionals) spent about $378 per resident. A city in the 75th percentile of all three measures (45% owners, $218 million in assessed value, 10% professionals) spent about $588 per person.

These relationships were circular. Local service provision was understood to increase the value of property. It was for this reason that the property tax was thought to be the most appropriate avenue for supporting local expenditures, as owners would be able to "recoup at least part of the levies in the form of higher real property worth" (Benson and O'Halloran 1987). Thus, property owners sought high levels of municipal services, which were expected to bring both direct benefits (from having access to clean water, paved streets, reliable fire-fighting, etc.)

and indirect benefits through increases in property values. In turn, cities expected owners to fund public goods. Yet, even in the early 20th century, owners were prone to believing that city governments were wasteful and they often opposed increases in taxes. Residents wanted high quality services, but were loath to pay for them.

Property owners' orientation toward both government and services was related to the emerging understanding of *who* should benefit from publicly-funded improvements (Myrdal 1944). The cities with the fastest growing service provision were also cities with high levels of racial and ethnic diversity. As Tretter (2012) explains, growth in municipal service provision operated "within a framework of white supremacy" (p10). Controlling who accessed the new benefits was of utmost importance. During this period, the vast majority of blacks, Asians, and Latinos lived in places where they lacked the right to vote; and everywhere, foreign-born residents had to be naturalized before participating (Keyssar 2000). Thus, the preferences of these groups hardly played a direct role in formation municipal policy. A white voter living in Birmingham in 1902 could be certain that no matter how much money the local government raised in taxes, black residents would have little say in how that money was spent. The same was true for a San Franciscan thinking about his Chinese neighbors and for an El Paso resident concerned with Mexicans in his city (Myrdal 1944, Chen 2000, Fox 2012). However, most public goods provided by cities were not targetable to individuals.[46]

When municipal governments provide streetlights and sewers, even those ineligible to vote benefit from these services. But, residential segregation could limit equality of access. Segregation made targeting services – at least to groups, if not individuals – easier. As will be

[46] Municipal jobs, particularly when distributed as patronage, are an exception to this statement. However, despite early accounts to the contrary, the presence of political machines actually depressed spending (Trounstine 2008, Fox 2010, Brown and Halaby 1984). Thus, it appears to be the case that growth in municipal governments has never really been driven by the logic of patronage.

shown in detail in the chapters to come, segregation allowed city governments to collect taxes from poor and minority residents, but underprovide services to them – thereby holding down the total tax bill. Oates (1981) explains that for many important local services such as education and public safety, the characteristics of residents are more important in determining the quality of the public good output than budgetary contributions. Thus, the generation of race and class segregation via policy enacted by local governments (such as zoning or urban renewal), was, in and of itself, a mechanism to improve municipal service provision. Segregation also ensured that the presence of poor and minority neighbors would not threaten property values. As the chapters ahead will show, it was in those places where city spending was high that segregation was institutionalized through local public policy; such institutionalization was pursued most adamantly by white owners and developers of property.

Explaining and Measuring Segregation

The high level of residential segregation in America has been tremendously well-documented (see Charles 2003, Ross 2008, and Boustan 2012 for extensive literature reviews). A smaller, though still well-developed, body of literature is focused on class segregation (see Bischoff and Reardon 2013 and Jargowsky 1996 for reviews). The debate over the fundamental causes of segregation is extensive and nuanced. Scholars have focused on two primary explanations: individual preferences for same race/income neighbors (particularly among whites and the wealthy) and market explanations (e.g. differences in the socioeconomic status of different racial groups and the ability to pay for quality housing/transportation among the poor).

Research on racial segregation largely concludes that the driving force behind residential separation is white preferences for same race neighbors (Cutler et al. 1999, Bayer, Ferreira, and

McMillian 2007, Charles 2006).[47] Boustan (2010) finds that in northern metropolitan areas, between 1940 and 1970, every black arrival from the South was associated with 2.7 white departures to the suburbs. Several scholars show that differences in socioeconomic characteristics such as education, income, wealth, and family structure cannot fully account for segregated living patterns for blacks, but *does* explain a fair amount of the segregation of Latinos and Asians (Bayer et al. 2004, Erbe 1975, Massey and Denton 1987 and 1993, Iceland and Wilkes 2006). Logan summarizes by explaining that racial segregation for blacks is due to the inability to "translate higher income…into residential mobility" (Logan 2011 p15).

Several scholars find that income inequality is an important driver of economic segregation (Bischoff and Reardon 2013, Watson 2009). Others concentrate on selection. Alesina et al. (2004) show that people are willing to give up economies of scale in order to avoid being in a jurisdiction with significant income heterogeneity and Bayer, Ferreira, and McMillian (2007) reveal that households self-segregate on the basis of education.

The links between race and class segregation also form a considerable literature. Some scholars like Denton and Massey (1991), Krysan et al. (2008), and Emerson, Chai, and Yancey (2001) find that whites avoid black neighbors *because* they are black, while others like Ellen (2000), Yinger (1997), Taub et al. (1984), and Harris (1999) argue that whites use black neighbors as a proxy for neighborhood quality. That is, whites do not avoid black neighbors per se, but rather choose what they perceive to be better neighborhood amenities or neighbor characteristics like wealth.

With only a handful of exceptions (e.g. Rothwell 2011, Pendall 2000), quantitative research on the causes of segregation ignores the political context in which it occurs. Local

[47] A small amount of scholarship shows that black preferences for same race neighbors contributes to segregation (Bayer, Ferreira, and McMillan 2007, Fossett 2006)

policies and political battles are crucial for understanding *how* white/wealthy preferences for homogeneity and socioeconomic inequalities are translated into residential patterns. To be sure, scholars have extensively documented the *private* mechanisms by which these factors affect segregation (e.g. via racial steering, mortgage discrimination, and willingness to pay for homogenous neighborhoods). But even private mechanisms may be shaped by local policies and political concerns. For example, I argue that white beliefs about available amenities in poor and minority neighborhoods are, in part, the product of under provision of public goods early in the 20th century. Cutler et al. (1999) find that these beliefs contribute to whites' willingness to pay higher housing prices in whiter neighborhoods. In the next section, I provide the first piece of evidence for this argument. Segregation is correlated with city expenditures – places that provide more services are also more segregated.

There are many different ways to measure segregation (e.g. the degree to which groups are disproportionately distributed across geographic space). Indices of segregation are typically correlated with each other, but capture different theoretical dimensions of separation and so, measure different things (Massey and Denton 1988). The two most commonly used measures are the index of dissimilarity and the index of isolation which can be intuitively interpreted respectively as the proportion of a racial group that would need to move neighborhoods in order to generate an even racial distribution given the racial makeup of the larger community, and the racial makeup of the neighborhood in which the typical member of the racial group lives. While these are obviously meaningful dimensions of segregation, neither measure includes the most relevant information from a political perspective. In politics, what matters is not just how individuals from different racial groups are distributed across neighborhoods, but also how large each racial group is relative to others and how big of an impact each neighborhood might have

on the vote. That is, we need a measure that weights diversity by group size and weights evenness by population size. The *H* index developed by Theil (1972) meets these criteria.

Theil's *H* Index measures the difference between the diversity of the city and the weighted average diversity of individual neighborhoods. Diversity scores for each neighborhood and the city as a whole are influenced by the relative size of racial groups, while the overall index is influenced by the relative size of each neighborhood, giving more weight to larger than to smaller places. Both types of weighting are key to understanding the political implications of segregation. We should expect the effect of segregation to be most pronounced when minority groups are unevenly dispersed across geographic units *and* represent a substantial share of the population.

Theil's *H* has a number of other useful qualities. Importantly, for understanding city politics, Theil's *H* can be calculated for more than two groups at a time (unlike either the dissimilarity or isolation indices). Additionally, it is the only index that obeys the principle of transfers in the multi-group case - the index declines when a minority resident (theoretically) moves to a neighborhood with fewer minority residents (Reardon and Firebaugh 2002). Finally, as will be discussed in the next section, Thiel's *H* is additive and can also be aggregated to higher levels or decomposed into its constituent parts.

Theil's *H* Index is built from Theil's entropy score which is a measure of diversity itself

$$E = \sum_{r=1}^{R} (\pi_r) \ln \frac{1}{\pi_r}$$

where π_r represents the proportion of the population in racial group r (or class group r if the index is measuring class segregation). The higher the entropy score, the more diverse an area

is.[48] The score ranges between 0 and the natural log of the total number of groups *R*. It is maximized when individuals are evenly distributed among the different racial groups (e.g. when

$$\pi_r = \frac{1}{R} \text{ for all } r$$

).[49] Entropy is calculated for each neighborhood individually and for the city as a whole.

The *H* Index measures the degree to which the diversity in each neighborhood differs from the diversity of the city as a whole, expressed as a fraction of the city's total diversity and weighted by the neighborhood's share of the total population.

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents total population of neighborhood *n* or city *c* and E is the entropy of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city, and 1 where all neighborhoods contain only one group.[50] This *H* Index serves as a key outcome to be explained throughout the book.

The dataset that I constructed to measure segregation is built from a number of different sources. The calculation of the *H* Index requires data on population characteristics at the sub-city level. Cutler et al. (1999) digitized sub-city demographics on race and immigration for 178 different cities from the 1890- 1950 Censuses. To this, I add available data that I encoded on homeownership from the 1900 Census and data from the Elizabeth Mullen Bogue files (1975) on

[48] Where any group's share of the population is 0, the natural log is set to zero, as is the convention in the literature (Iceland 2004).
[49] A scatterplot relating a white/nonwhite calculation of E to percent white is included in appendix Figure A1.1.
[50] In all analyses, neighborhoods are represented by Census tracts, which are relatively stable, contiguous geographic areas containing approximately 4,000 people. Most studies of segregation (e.g. Massey and Denton 1993) use Census tracts as a proxy for neighborhood (although this is not without debate, see for instance Logan et al. 2015).

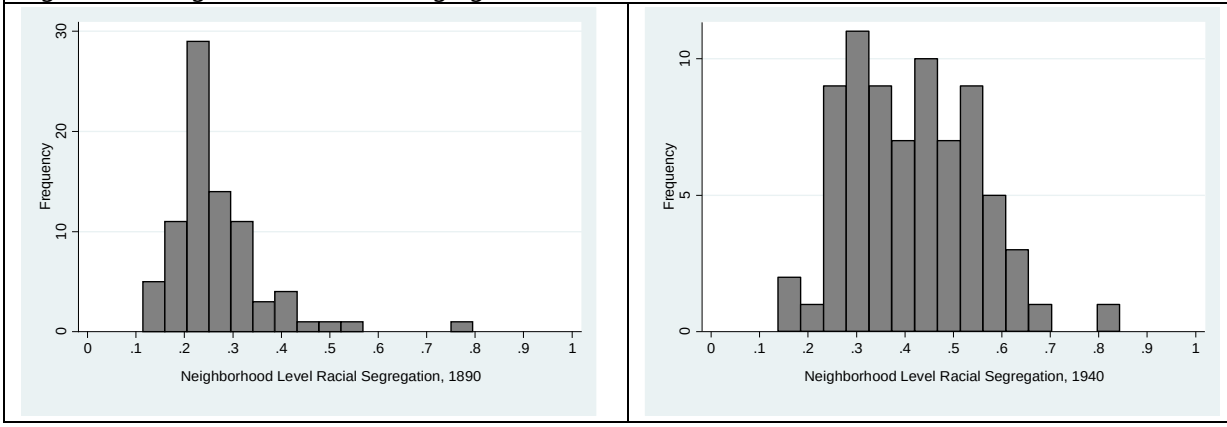
homeownership from the 1940 census.[51] For the 1970-2000 Censuses, I rely on a product developed by GeoLytics called the Neighborhood Change Database (NCDB). The NCDB matches and normalizes Census tract boundaries for each Census year, allowing for direct comparison in demographic changes across time. Finally, I add data from the 2007-2011 American Community Survey. These data allow me to create a panel dataset measuring segregation at the Census-tract level for cities and metropolitan areas for more than 100 years.

Figure 1.4 plots the distribution of racial segregation scores in 1890 and 1940, using data for the 80 cities with populations of at least 25,000 and with at least 1,000 blacks as of the 1890 Census.[52] In 1890, racial segregation patterns were similar from place to place, and generally fairly moderate – although higher than some historical analyses indicate (Cutler et al. 1999). Both features had changed substantially by 1940.

[51] The data from 1900-1940 are collected at the ward level (political units for electing city council members). Starting in 1940, the Census published tract-level data for some cities. Wards tend to be larger in area than tracts and therefore, suggest a smaller value of the segregation index without actually representing a lower level of segregation. To account for this, I adjust all ward-level estimates by a correction factor calculated using a set of 47 cities that reported both ward and tract-level data in 1940.

[52] For all figures presented in this chapter, the two groups used to calculate the *H* index are whites and all others for years 1890-1970. For 1980-2011, the groups are non-Hispanic whites and all others. Throughout the book, I calculate the *H* Index by tract-city-county-msa (Metropolitan Statistical Area). This means that cities which cross county lines end up with multiple observations. This is necessary because Census tracts are nested within counties – not cities. When presenting any analysis at the city level, I use the observation representing the largest share of the city population.

Figure 1.4: Neighborhood Racial Segregation in 1890 and 1940



Note: The white/nonwhite *H* index for 1890 is calculated using wards as the base population unit with an additional correction factor to make the data comparable to tract-level estimates. The *H* Index for 1940 is calculated at the tract level where available and at the ward level otherwise. Data provided by Cutler et al. (1999) and Bogue (1975).

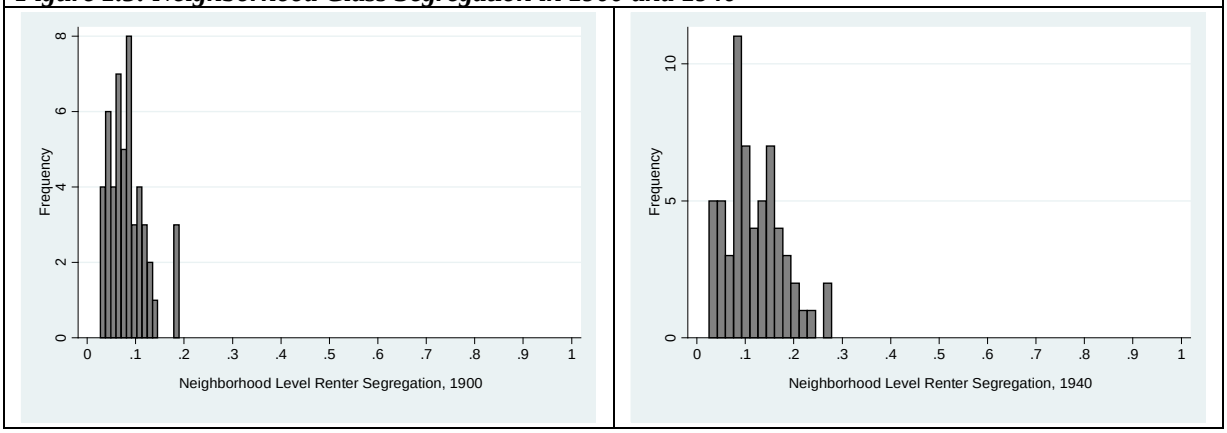
In all but a handful of cases, neighborhood-level racial segregation rose between 1890 and 1940 – on average rising 0.15, a change of about 65%. But the standard deviation is large at 0.13; some cities segregated much more intensely than others. There are many ways to consider measuring class segregation. Throughout the book I use two measures – the distribution of renters versus homeowners, and the concentration of households in the top income threshold.[53] The correlation between owner and wealth segregation is about 0.60. I rely primarily on the former measure for two reasons. First, it is available for the entire time period. More importantly, the existing scholarship indicates that it is property ownership – not wealth – which is the more important driver of local political participation and preferences (Fischel 2000, Oliver and Ha 2007). The downside of this measure is that, at an aggregate level, it is very resistant to

[53] The Census reports income categorically, not continuously; wealthy refers to the number of families in each Census tract with incomes above particular thresholds for each Census year. I use family as opposed to household income because the NCDB does not report household income at the tract level. The thresholds were determined by calculating the average family income for all Census tracts in the United States for each Census year. The wealthy threshold represents the income bin with a starting point closest to the 90th percentile of this distribution. The thresholds for each census year are: $35,000 for 1980, $75,000 for 1990, $100,000 for 2000, and $150,000 for 2011. All families with this amount of income or more are categorized as wealthy. Census tracts range from 0 to 100% wealthy, with a mean of 18%, a median of 13%, and a standard deviation of 16%.

change as the housing stock changes more slowly than demographics. Wealth segregation is a more straightforward measure of the residential divisions along socioeconomic lines, but it is only available starting with the 1970 Census and is less directly affected by city policy.

To demonstrate change over time, Figure 1.5 presents data on the renter/homeowner distribution within cities. This figure reveals that class segregation started off much lower and was more consistent from city to city as compared to racial segregation, and increased a small amount (0.037) between 1900 and 1940.

Figure 1.5: Neighborhood Class Segregation in 1900 and 1940



To determine how segregation correlates with expenditure in the pre-war period, I add to the segregation dataset the measure of *Logged Expenditures Per Capita* described in the previous section. Because segregation data are measured every decade, and expenditures in years ending in 2 and 7, I interpolate spending data. I then lag spending by five years under the assumption that demographic sorting takes time to respond to budgets. I regress *Racial Segregation* and *Renter Segregation* on the lagged *Expenditures* variable. As in the previous section, I add fixed effects for cities. This fixed effect model analyzes the relationship between lagged expenditures and racial segregation over time within cities. This accounts for variation across cities on all other dimensions that might affect segregation and spending.

Table 1.4: Correlations Between Spending and Segregation

	Racial Segregation			Renter Segregation		
	β	Std. Err	P>|t|	β	Std. Err	P>|t|
Expend. Per Capita, 5 year lag (logged)	0.100	0.010	0.000	0.026	0.003	0.000
Constant	-0.238	0.059	0.000	-0.052	0.018	0.005
N	368			179		
Number of Cities	118			56		
R^2 within	0.292			0.383		
R^2 between	0.020			0.010		
ρ	0.802			0.931		

Note: Fixed effect for cities included, but not presented.

The results, presented in Table 1.4, indicate a positive correlation between spending and segregation. The R^2 suggests that about 30 to 40% of the variation in city segregation levels can be explained by variation in the budget. Places with larger budgets were more segregated five years later compared to cities with smaller budgets up until the Second World War. For a host of reasons, this relationship would change going forward.

Suburbanization – Another Form of Segregation

Teaford (1979) argues that two conflicting forces animated city development in the late 19th and early 20th century. On the one hand, socioeconomic diversity generated an impetus for separation. As early as the mid-1800s, "the urban population was resolving itself into separate geographic spheres – factory zones, ethnic neighborhoods, upper-middle-class retreats, race track havens – and each zone sought local self-government as a means of protecting its own particular interests" (Teaford 1979, p23). This separation, Teaford shows, led to the explosion of newly incorporated municipalities. But, over the course of the next 50 years, many of these tiny new cities consolidated and/or were annexed into larger central cities for one primary reason: the provision of city services. Prior to 1900, suburban governments were simply unable to provide the quality of sewers, clean water, paved streets, uniformed police forces, and fire-fighting that

was available in the central city. As a result, as cities became more diverse, the forces of separation pulled people into different neighborhoods, but not into different cities.

However, in the period following the Second World War, America began to suburbanize rapidly (Rappaport 2005). Scholars have detailed the role that automobile accessibility (Glaeser, Kahn, and Rappaport 2008), highway construction (Nall forthcoming), federal programs encouraging home ownership (Jackson 1985), changes in the building industry, and rising incomes (Margo 1992) played in the growth of suburbs. The vast majority of people who arrived in the bucolic, grassy, neighborhoods filled with single-family homes were whites with incomes slightly (although not dramatically) higher than the median income of the central city (Cutler et al. 1999, Winsberg 1989). By about 1940, many larger suburbs were able to compete with central city service provision, thus increasing the attractiveness among residents, industry, and business to move away from the center. As Teaford (1979) explains, "while the forces encouraging unity were weakening, the forces of separatism and disunion remained powerful" (p84). Thus, in the middle of the century, central cities stopped growing politically and suburbs arose as powerful actors in the metropolitan universe (Teaford 1979, Danielson 1976, Miller 1981, Burns 1994). In 1970, more than half of all metropolitan area populations lived outside of the central city; a figure that would grow to two-thirds over the next 30 years. The rise of suburbs decoupled residential spaces from job spaces, and encouraged suburban residents to prioritize neighborhood amenities and property values in political decision making (Teaford 1979, Fischel 2004).

As they moved outside of the central city, suburbanites sought to protect their investments (high quality public goods and property values) in much the same way as their predecessors had – by institutionalizing segregation through public policies like land use

planning and zoning. Thus, the impetus toward separation in the latter half of the 20th century played out across, rather than within, city lines. The level of segregation is of crucial importance to politics. When cities are not segregated by neighborhood, district representation ensures that all residents within a particular location are likely to be provided similar services. When a district councilor wins a public park for his neighborhood all those who live nearby benefit. As the level of segregation shifts from blocks to neighborhoods, residents are more likely to lose representation. Still though, when segregation occurs across neighborhoods within cities, it is possible for residents of segregated neighborhoods to affect the delivery of municipal services through the political process. If a heavily minority neighborhood lacks a public park, residents from this neighborhood might mobilize to try to elect a mayor or city council member who is responsive to their demands. But when segregation occurs across cities, heavily minority cities have no ability to affect the distribution of public goods from neighboring white towns.

To understand how segregation patterns have changed over time, I compiled a measure of segregation that accounts for segregation both within cities and across them. In order to do this, I build on the measure of segregation presented in the previous section – Thiel's *H* Index. Theil's *H* is suited to this purpose because it is perfectly additive for nested geographies (Reardon and Firebaugh 2002, C.S. Fischer et al. 2004). In my case, census tracts are nested within cities, and cities are nested within metropolitan areas. Residents can be segregated in two ways – across neighborhoods within cities, or across cities within metropolitan areas. My measure combines these two types of segregation.

As explained above, the *H* Index measures the degree to which the diversity (*E*) of subunits differs from the diversity of a larger unit. For each Census year, I calculate *H* Indices at the two levels that are of interest – within cities and across cities. Respectively, these measure

the extent to which Census tract diversity differs from city diversity (H_{c_t}) and the extent to which city diversity differs from metropolitan area diversity (H_{m_c}). [54]

$$H_{c_t} = \sum_{t=1}^{T} \frac{P_t}{P_c}\left(\frac{E_c - E_t}{E_c}\right)$$

$$H_{m_c} = \sum_{c=1}^{C} \frac{P_c}{P_m}\left(\frac{E_m - E_c}{E_m}\right)$$

Where *P* represents total population of the tract *t*, city *c*, or metropolitan area *m*, and *E* represents the entropy of the geography ($E = \sum_{r=1}^{R}(\pi_r)\ln\frac{1}{\pi_r}$).

I combine the two indices to produce a total *H* Index for the metro area calculated at the tract level, H_{m_t}.

$$H_{m_t} = \sum_{t=1}^{T} \frac{P_t}{P_m}\left(\frac{E_m - E_t}{E_m}\right) = H_{m_c} + \sum_{c=1}^{C}\left(\frac{P_c}{P_m}\right)\left(\frac{E_c}{E_m}\right)H_{c_t}$$

To illustrate the two levels of segregation, Figure 1.6 provides images from a map of the population developed by Dustin Cable for the Weldon Cooper Center for Public Service at the University of Virginia. The map includes one dot for each person in the United States as of the 2010 Census, color coded by race (blue for white, green for African American, red for Asian, and orange for Latinos). [55]

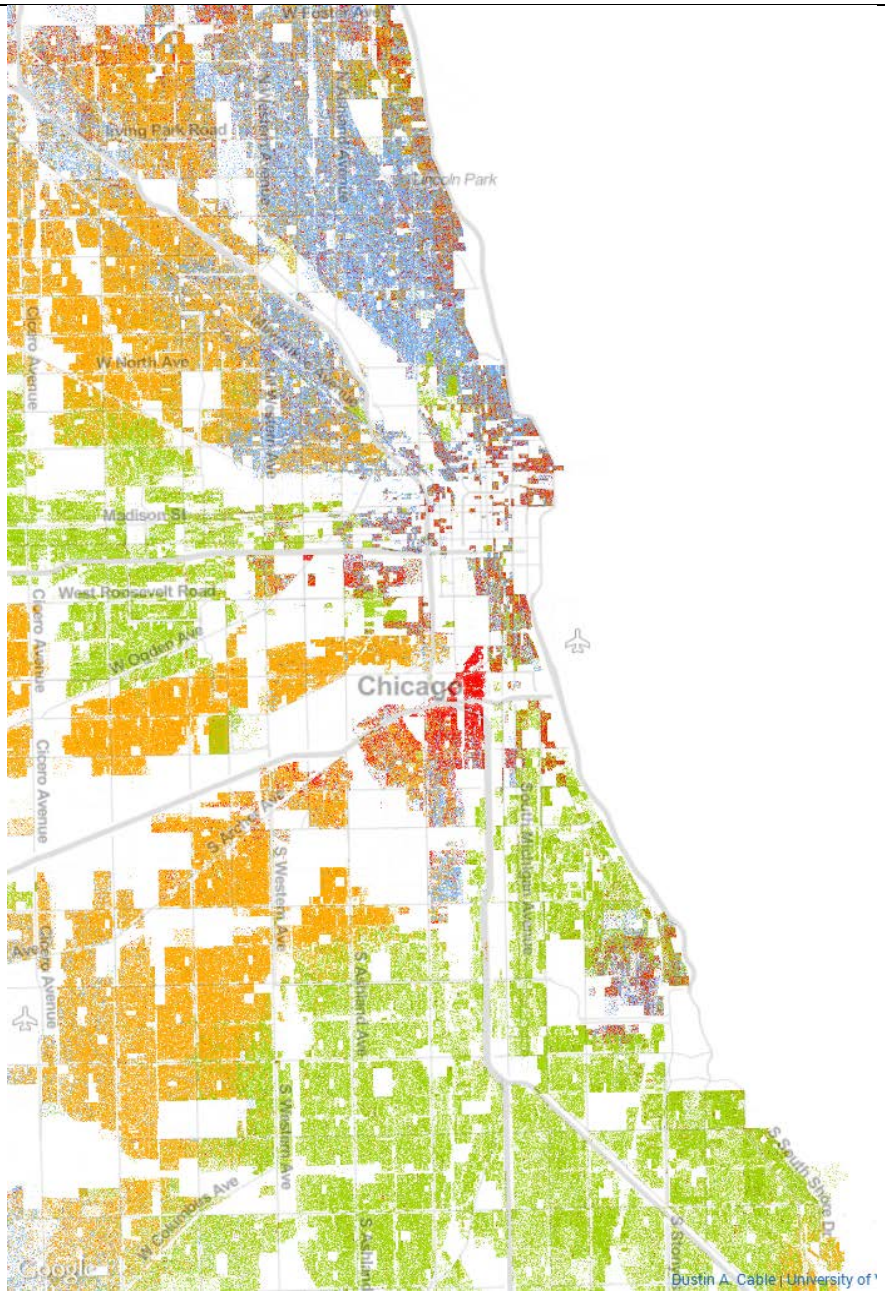
[54] Census tracts are perfectly nested within states and counties. However, in some cases, tracts cross city lines. In these cases, GeoLytics assigned the tract to the city containing the largest share of the tract population. In 2011, tracts are weighted by the share of population contained in each city. Observations are unique when defined by year, tract, city, county, and metropolitan area. Tracts located in unincorporated areas within a metropolitan area (even if they are denoted as places by the Census) are combined as a single unincorporated unit. Tracts outside of metropolitan areas are not included in the analysis. I use Metropolitan Statistical Areas and where possible, Primary Metropolitan Statistical Areas, as the highest level of aggregation (not Consolidated Metropolitan Statistical Areas which are much larger).

[55] Available at http://demographics.coopercenter.org/DotMap/index.html.

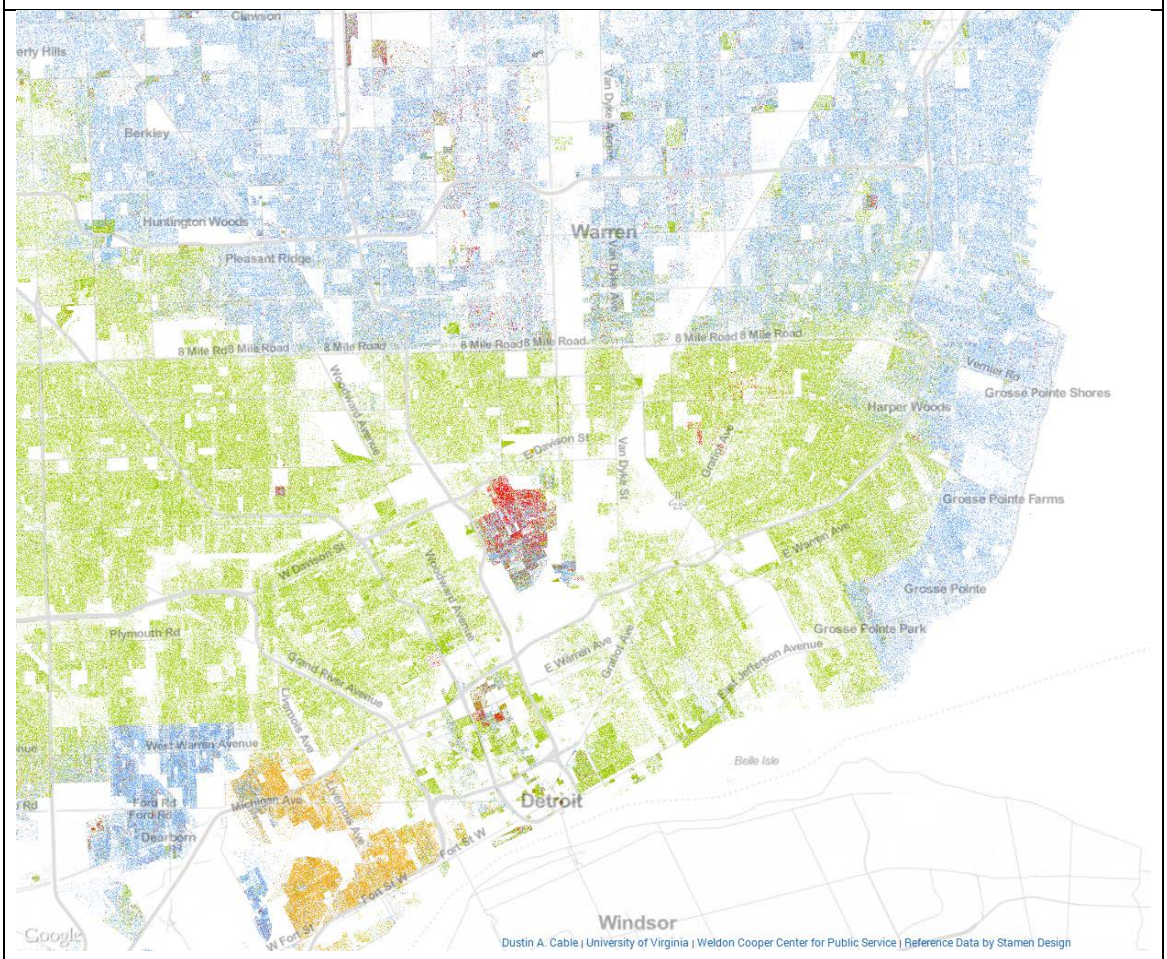
The upper panel shows Chicago, Illinois – a city in which whites are segregated from nonwhites in different neighborhoods (indicating a high amount of segregation across tracts within the city, H_{c_t}). The bottom panel shows a section of the Detroit, Michigan metropolitan area where racial sorting is much more prevalent *across* city lines as opposed to within them (indicating a high value of H_{m_c}).

Figure 1.6: Segregation Within City vs. Across Cities, 2010

Chicago, Illinois: Segregation within a City



Detroit, Michigan: Segregation Across City Lines



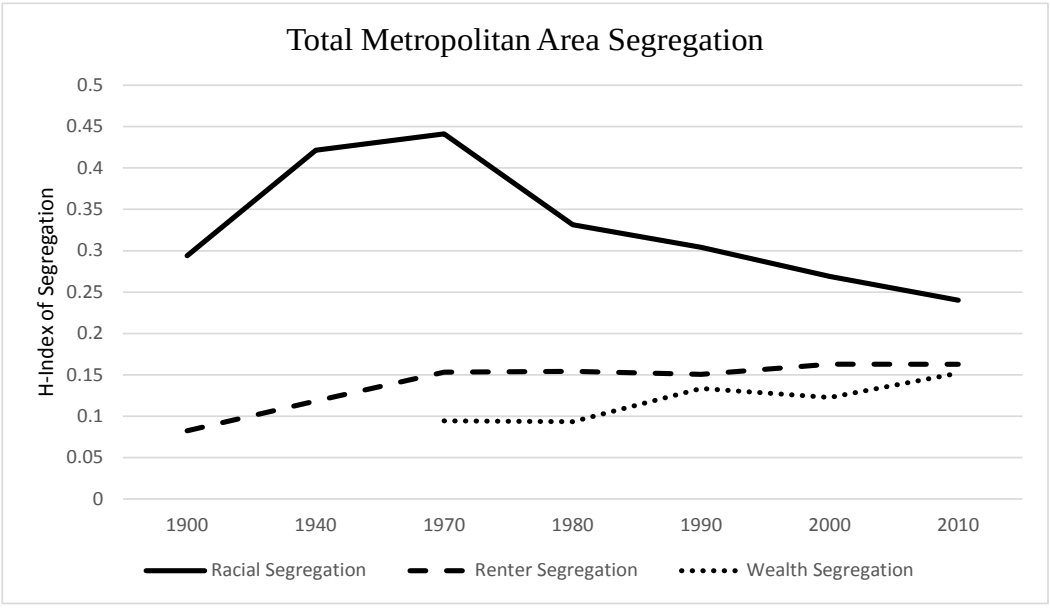
The maps make it clear that white and nonwhite residents of Chicago live in homogenous neighborhoods. Overall, the city is very segregated. The value of H_{c_t} in 2011 for Chicago was 0.379; the value of H_{m_c} (total segregation across cities) for the Chicago metropolitan area was 0.192. In the bottom panel, the neighborhoods within the cities of the Detroit metropolitan area are much more homogenous. The stark horizontal divider between the blue and green dots is 8

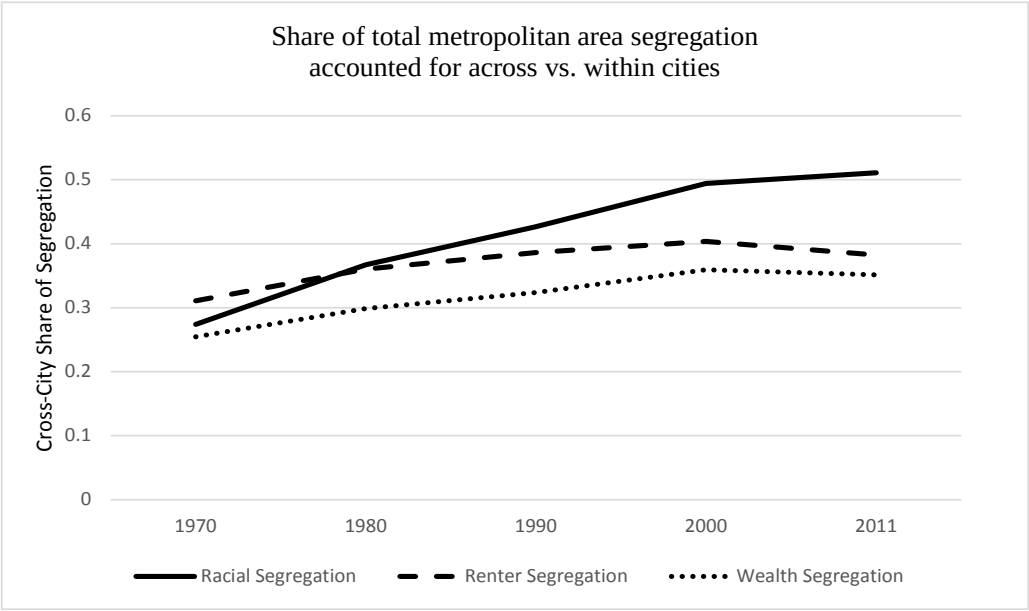
Mile Road which marks the boundary between Detroit and the neighboring ***city*** of Warren. A similar vertical division can be found on the right hand side of the picture, noting the boundary between Detroit and the cities of Grosse Pointe, Grosse Pointe Park, Grosse Pointe Farms, and Grosse Pointe Shores.[56] The value of H_{c_t} (within city segregation) in 2011 for Detroit was 0.220, while the value of H_{m_c} for the metropolitan area was 0.395.

How has metropolitan area segregation changed over time? The top panel of Figure 1.7 shows total metropolitan segregation measured at the tract level (H_{m_t}) since 1900, while the bottom panel shows the share of that segregation that was accounted for across cities rather than within them ($\frac{H_{m_c}}{H_{m_t}}$) from 1970-2011.

[56] The maps are shaded based on population density, hence the darker colors in Chicago.

Figure 1.7: Changing Metropolitan Segregation Patterns





These figures reveal that by 1970, racial segregation had peaked and begun to decline, while class segregation began a slow ascent. Between 1970 and 2011, in nearly every

metropolitan area in the United States, neighborhood segregation was exchanged for city level segregation along both race and class lines. The figures also show that historically, class segregation was much lower than racial segregation, but by 2011, the indices had converged substantially. The relationship between race and class segregation also increased over time. In 1990 (the earliest date for which I have data on all 330 metropolitan areas), the correlation between race and renter segregation was 0.19. It rose to 0.32 in 2011. The correlation between race and wealth segregation increased from 0.46 to 0.51 over this same period. The link between race and wealth segregation across city lines is even stronger; it was 0.70 in 2011. This tightening link between race and class is driven by changes in both race and class segregation, both within and across cities. However, these remain distinct demographic patterns.

Chapter 2: Local Government Action Contributes to Segregation 1900-1940.

Segregation along both race and class lines grew in tandem with the growth of cities (Meyer 2000). Race, ethnic, and class enclaves developed as urbanization brought white migrants, African Americans, and immigrants to cities (Teaford 1979). At the turn of the century, the predominant pattern of segregation occurred building by building, block by block, and sometimes several blocks by several blocks, but typically not by neighborhoods (Logan et al. 2015, Meyer 2000). Many cities featured multiple racial, ethnic, and class enclaves (Kellogg 1982, Rabinowitz 1978). In Philadelphia, for instance, about 40% of the black population lived in central city wards (4th, 5th, 7th, and 8th); but there were significant clusters of black homes in the 14th, 15th, 20th, 22nd, 26th, 27th, 29th, 30th, and 37th wards too (DuBois 1899). In Atlanta blacks lived in "Shermantown, Mechanicsville, Hell's Half Acre, Bone Alley, and Pigtail Alley," as well as "Darktown….Peasville…and Jenningstown," (Rabinowitz 1978, p106). By 1940 neighborhoods had become much more homogenous. So, while the residential location of people of color and the poor was nearly always restricted, the pattern of segregation changed during the years leading up to the Second World War. In this chapter I argue that local governments played a role in producing this change. Governments adopted zoning and other policies that created or reinforced segregation in service to business elites and white, property-owning constituents who were demanding a larger, more active city government.

In the very large social science literature on the causes and maintenance of race and class segregation, the contributions of local government are given limited attention.[57] Boustan (2012) concludes, "the most important [factor in the generation of residential segregation] appears to be individual choices of white households" (p318). Hayward (2013) agrees, arguing that restrictive

[57] The contributions of the federal government, on the other hand, are well covered (Jackson 1985, Massey and Denton 1993).

covenants were, "a more significant mechanism of racial segregation," than local government activities (p59).[58] Other scholars combine private and public actions into a single theoretical construct. For example, Cutler et al. (1999) provide evidence of "collective action racism" which involves, "specific policy instruments such as racial zoning or restrictive covenants prohibiting sales to blacks, or organized activities such as threatened lynchings or fire bombings that discourage blacks from moving into neighborhoods" (p476). Similarly, Dreier et al. (2004) associate racial zoning laws with biased real estate codes of ethics, racial steering, insurance redlining, and white violence concluding that, "racial segregation thus stems from the routine practices of the private real estate industry" and the spontaneous choices of urban residents "as well as from government policy" (p 120).

The role of government was important. For one thing, using the state to engage in promote restrictive collective action is qualitatively different than arranging segregation privately. Marshalling the power of city government institutionalizes prejudicial behavior and denies victims recourse. As Abrams (1955) explains, "passions and prejudices…unsanctioned by government…exhausted themselves" (p206). But when democratically elected local governments developed policies promoting segregation they became, "instruments of oppression against minorities" (p207).

Furthermore, while prejudicial attitudes and behavior were widespread during this period, government action was more variable. Understanding where and when local governments worked to create segregation along both race and class lines helps to clarify where segregation was likely to become entrenched and where it was more fluid, as well as provide insight into the factors that generate consequential local policy decisions.

[58] Of course, restrictive covenants required government action for enforcement. However, they could be generated without government involvement.

In this chapter, I explore the factors that contributed to the adoption of zoning laws. I argue that zoning was enacted by political elites seeking to manage the distribution of public goods to their core supporters. To present that argument, I first offer a historical narrative detailing the adoption of zoning laws by municipal governments. Then, I present a quantitative analysis of these adoptions. I find that cities with higher property taxes and larger budgets (where more was at stake), where Republicans (who led the municipal reform movement) had greater support, and where political participation was low (and thus more likely to be heavily skewed toward middle-upper class, native, white voters), zoning ordinances were more likely to be adopted. Finally, I analyze the effect of zoning adoption on future levels of segregation. I show that cities that were early adopters of zoning went on to become more segregated along both race and class lines than similarly situated cities without early zoning plans.

The dawn of the 20th century was an exciting time for local government. Populations exploded as the industrial revolution took hold. In this environment, the limited, caretaker approach to city governance became suddenly and profoundly insufficient for maintaining health, order, and property. Monkonnen (1988) explains, "cities could have chosen to ignore sewage, crime, unschooled children, and slow transportation by simply tolerating higher disease rates, offense rates, illiteracy rates, and traffic tangles" (p4). City governments did not take that path. Instead city governments worked aggressively to shape their social and economic environments. As Chapter 1 revealed, between 1890 and 1940, cities became modern – providing services like clean water, fire protection, police patrol, and road paving. It was in this environment that cities also began to seek control over space and residents' use of space through zoning and city planning. The end goal of this control, as was true of most Progressive Era reforms, was to improve the lives and opportunities for businesses and residents – more

specifically, US born Anglo residents (Tretter 2012, Woodward 1955, Toll 1969, Brownwell 1975).

As Monkonnen indicates, it was far from obvious that cities would assert control over their environments, but the rapid spread of slums, worries about skyscrapers blocking natural light, fears of conflagration, and concern about public health threats provided early inspiration for cities to invoke their policy power of regulation over nuisances (Toll 1969).[59] Reformers debated the correct policy solutions for these ills, recommending for example, density restrictions (Woodbury 1929), stricter building codes (Power 1983), the removal of alley dwellings (Silver 1997), or policies, including increased public transportation, that would encourage suburban homeownership for the working class (Baar 1996). In many cases, typically at the urging of local chambers of commerce, city councils chose to pursue zoning – regulating the use, height, and area of buildings and land (Brownwell 1975). Zoning was sometimes, but often not, combined with general development plans for the city. While zoning became wildly popular, planning did not. This decoupling of zoning from planning was viewed negatively by some leaders of the early planning movement who thought the creation of homogenous neighborhoods would be likely to reinforce social divisions and inequality (Toll 1969). Of course, this was often precisely the goal of zoning supporters.

The rise of social Darwinism contributed to the attraction of zoning as a solution for burgeoning problems. Social Darwinists argued that the evolution of humanity would follow a process of natural selection in which the environment played a defining role. As a result, controlling the environment was of utmost importance (Toll 1969). A related body of literature

[59] A number of important court battles ensured that zoning would be constitutionally allowed for the promotion of health, safety, welfare, and morals and did NOT constitute the deprivation of life, liberty, or property (see Hayward 2013 and Toll 1969 for overviews).

came to understand race and the differences between racial and ethnic groups as biologically rooted, hence, immutable (Hayward 2013). According to this doctrine, the inherent inferiority of blacks and other people of color (Native Americans, Chinese, Japanese, Mexicans), the preservation of "race purity" demanded, "segregation and discrimination in recreation, in religious service, in education, before the law, in politics, in housing, in stores, and in breadwinning" (Myrdal 1944, p58). Additionally, scientific and medical experts as well as politicians believed that the unsanitary habits and homes of the poor and people of color spread epidemic disease (Shah 2001, p6). In combination, these new theories offered a convincing rationale for the creation of special districts to quarantine offending groups. By 1930, about half of all large cities in the US had adopted comprehensive zoning plans.

Political leaders often used threats to public safety as a rationale for legislating segregation. New York's 1916 zoning law, the first comprehensive zoning ordinance in the nation, sought to limit the health threat posed by skyscrapers which blocked natural light and so, contributed to the spread of tuberculosis (Toll 1969, p154). Because immigrants and Blacks were viewed as disease carriers, segregating them was a typical goal of zoning. In San Francisco, the first city to segregate explicitly on the basis of race, whites had grown increasingly paranoid that Chinese residents were spreading diseases like smallpox and tuberculosis and in 1890, enacted an ordinance that required all Chinese residents and their businesses to move, within 60 days, to the section of town which had been set aside for, "slaughterhouses, tallow factories, hog factories, and other businesses thought to be prejudicial to the public health or comfort" (McClain 1996, p224). In Baltimore, segregationists agreed that, "blacks should be quarantined in isolated slums in order to reduce the incidents of civil

disturbance, to prevent the spread of communicable disease into nearby white neighborhoods, and to protect property values among the white majority" (Power 1983, p301).

The belief that zoning would create stability in property values was widely held and generated strong support from land owners, commercial organizations, bankers, realtors, and developers (Abrams 1955, Brownell 1975, Weiss 1987). Boston's first height restriction was passed in 1892 at the behest of downtown property owners who feared that the new skyscrapers would lead to an oversupply of office space and drive down property values (Kennedy 1992). In some places, this view had to be cultivated. In Los Angeles, for example, some developers were opposed to the city's 1908 zoning law because they worried it would inhibit growth (Weiss 1987). To combat such reservations, early supporters of zoning made sure to argue that their proposals would, "enhance, not detract from property values," (Toll 1969, p150). Zoning could easily have been invoked to improve the quality and health of working and lower class neighborhoods and limit land speculation (as some of the early reformers argued it should); however, "political pressures from those less inclined toward broad civic improvement" won out (Silver 1997, p24).

As zoning practices spread through the 1920s, emphasis on the enhancement of property values became the dominant argument; almost universally, it was believed that the wrong sorts of people residing or sometimes even working in an area could negatively impact property values. Abrams (1955) quotes an early real estate text which argued that, "…property values have been sadly depreciated by having a single colored family settle down on a street occupied by white residents," and another that claimed a similar effect of "unassimilated aliens." Both prescribed "rigid segregation" as a solution, "no matter how unpleasant or objectionable the thought may be to colored residents" (p159).

Aside from adding wealth to property-owning and voting residents, city governments had an even more powerful reason to protect and enhance property values – taxes (Lees 1994). An advertisement run by 5th Avenue merchants in the March 5th and 6th, 1916 editions of the New York Times argued that failure to support the city's new zoning plan would lead to "vacant or depreciated property," which would lead to "reduced taxes, leaving a deficit made up by extra assessment on other sections" (p5). Rising property values allowed municipal governments to grow without increasing tax rates. When some property values actually declined, municipal officials faced the unwelcome task of raising tax rates or cutting the budget.

As municipal governments began to spend vast sums on improving the lives and environments of residents, ensuring that the right (white/wealthy) residents benefited from the new city services became of utmost importance. This goal was clear to observers at the time. Booker T. Washington explained that, "the negro objects to being segregated because it usually means that he will receive inferior accommodations in return of the taxes he pays." Such objection stemmed from the belief that segregation would ensure that, "the sewerage in his part of the city will be inferior; that the streets and sidewalks will be neglected, that the street lighting will be poor; that his section of the city will not be kept in order by the police and other authorities, and that the 'undesirables' of other races will be placed near him." Thus, Washington concluded, "when a negro seeks to buy a house in a reputable street he does it not only to get police protection, lights and accommodations, but to remove his children to a locality in which vice is not paraded" (Washington 1915, p113-114). Frequently, white elites made arguments that taxing whites to pay for black public goods (like schooling) was "an indignity." One delegate to the Louisiana Constitutional Debate in 1864, incredulous at the proposition asked, "Shall we tear the slave away from his master and then force the master to educate him?"

(Louisiana Constitutional Debate, quoted at length in Bond 1934, p16-17). As a result, in many cities (see Chapter 3), black areas lacked municipal services such as, "paving, water, sewerage, lighting and garbage removal," (Knight 1927, p53; also Myrdal 1944).

Given that zoning was viewed as a way to both increase property values and maintain exclusivity in the distribution of public goods, it is unsurprising that Southern cities made early use of zoning to hem in expanding black neighborhoods and create clear dividing lines between white and black residential areas. Of course, the development of racial zoning in the South was part of a much larger process of reconfiguring race relations after the Civil War. During the period of Reconstruction and Redemption, whites subordinated, exploited, and killed blacks, but even in this context, the legal segregation of the races was not a foregone conclusion (Woodward 1955). [60] In fact, although Jim Crow laws were widespread, most Southern cities did not legislate residential segregation directly.[61]

Blacks being able and willing to live in white neighborhoods was a necessary (although not sufficient) condition for the enactment of legislation. Baltimore passed the first racial zoning law directed at blacks in 1910 following the violent response of white residents as black migrants moved into previously all white areas. Baltimore's ordinance prohibited whites and blacks from moving into city blocks occupied by a majority of members of the other race. Quite aware of the requirements of the 14th amendment, the Baltimore council argued (and the Maryland Supreme Court agreed), that because the ordinance placed the same limitations on both racial groups it

[60] One vivid example of the ways in which Jim Crow changed existing practice comes from New Bern, North Carolina. In 1913, the city aldermen passed an ordinance which required that all "colored bodies" buried in the public cemetery be dug up and moved to a segregated location.
http://www.newbernsj.com/article/20140209/Opinion/302099914

[61] Rabinowitz (1978) argues that the picture was different with respect to schooling. Here, segregation was immediate and unchanging after the end of the war.

was not discriminatory (Virginia Law Review 1916).[62] The vote of the city council fell along party lines with all of the Democrats in support and all of the Republicans opposed.[63] Republicans were joined in their opposition by the entire community of black residents, some real estate brokers, and white homeowners who lived in integrated neighborhoods (Power 1983). Democrats were not just responding to their white voters in their promotion of segregation. Limiting black residential location also bolstered Democratic political power by ensuring that blacks would be packed into certain wards; thereby reserving the rest of the city for Democratic control (Rabinowitz 1976).

In some places, black political power slowed or inhibited the enactment of segregation ordinances (Rice 1968). In St. Louis, an effort to pass a segregation ordinance failed because it was opposed by a significant number of city elites (including most of the city's leading Republicans, labor interests, religious leaders, and newspapers). The National Association for the Advancement of Colored People (NAACP) and the Knights of Pythias lobbied the St. Louis city government tirelessly and ultimately convinced 21 of the 28 aldermen and the mayor to vote against it. In 1912, the city went so far as to station five police officers at the house of a black family to protect them from, "possible attack by whites who resent what they term a 'Negro invasion' in their residential district" (*The Crisis* 1912 Vol 4, No 6, p272). In a low turnout election in 1916, supporters of the segregation ordinance won a city referendum and the city immediately began mapping the race of each city block. (Meyer 2000 19-21). In Kansas City, Missouri, blacks had a modest amount of political power due to their ties to the (Democratic)

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[62] Although the Court agreed with the city's reasoning about the 14th amendment, it ultimately declared the ordinance unconstitutional because its provisions were retroactive thereby representing a taking by the government. (*State v. Gurry* 121 Md. 534 (1913))

[63] Republicans were generally (tepidly) supportive of black rights in Baltimore and between 1890 and 1931, six black Republicans served on the Baltimore City Council (Greene 1979). Over the course of their careers, these councilors led the city council to provide significant contributions to Baltimore's black community; but none were able to defeat the segregated housing legislation.

Pendergast machine. Despite support from a significant segment of the city's white population, a racial zoning ordinance never made it past the lower chamber of the city council (Meyer 2000).

Bacote (1955) reports that throughout the late 1800s in Atlanta, black support was frequently courted by white factions. For instance, in the 1891 election, black candidates were nominated for council positions in the 1st, 4th, and 6th wards on the Citizens' ticket (an anti-prohibitionist faction of the Democratic Party). White factions did this when they were in danger of losing the election – in 1891 the anti-prohibition Democrats were worried about a Populist victory. To prevent white factions from seeking black support in the future, the Democratic Party adopted the white primary in 1892, and the state of Georgia enacted a new constitution in 1908 which included a character requirement, a literacy test, and made property ownership a condition for registration (Bayor 1996). These changes severely restricted black participation, ensuring that white factions would only rely on white votes. The evisceration of the black electorate and black representation opened the way to the city's enactment of segregation ordinances (Key 1949, Kousser 1974, Woodward 1955).

Atlanta enacted a racial zoning ordinance on the heels of a violent race riot in 1906. The riot erupted after local newspapers reported four alleged (but never substantiated) assaults upon white women by black men. According to Garrett (1969), the riot was ignited by the sight of black passengers riding next to whites on street cars. A white mob killed and beat dozens of black Atlantans over the course of three days. A concerted organizing effort among the city's African American population followed. White elites and politicians denounced the riot, and a public/private relief fund was even established for families of the murdered victims (Garrett 1969). However, the riot also led many whites to conclude that, "separation of the races is the only radical solution of the negro problem in this country" (Charleston News and Courier,

quoted in the New York Times, September 30, 1906). Following the passage of the ordinance in 1913, all blocks in the city were assigned racial designations based on the race of the majority of current residents (Silver 1997).

Fighting racial zoning was one of the early nationwide causes to be adopted by the NAACP (Rice 1968, Meyer 2000) and due to the organization's work, in 1917, the Supreme Court ruled racial zoning unconstitutional in *Buchanan v. Warley*. In the *Buchanan* decision the justices did not seek to protect the rights of black property buyers or to prohibit "amalgamation of the races," but rather to protect the right of white owners to, "sell or lease their lands and houses to whomsoever they pleased" (Virginia Law Review 1928, p531).[64] Nonetheless, the Chicago Defender declared that the, "hydra-headed monster of segregation…was killed by the Supreme Court," and argued that the, "decision [was] a direct slap in the face to white southern oligarchy." (November 10, 1917). According to Rice (1968), it was also a, "victory for moderate whites and Republicans" (p197).

Following *Buchanan*, many cities sought to enact constitutionally defensible racial zoning plans by turning to comprehensive city plans (Silver 1997).[65] In 1914, a racial zoning ordinance was proposed in Birmingham while the *Buchanan* case was already moving through the court. A group of black attorneys convinced the Birmingham city council that they could face a costly legal battle if the Court ruled against Louisville's ordinance. In order to prevent this, and to appease white demands for segregation, the council chose instead to adopt a

[64] The Court found that the ordinance improperly restricted the rights of property owners to dispose of property. It did not challenge the separate-but-equal doctrine that was in place as a result of the 1896 *Plessy v. Ferguson* decision.

[65] San Francisco was the first city to utilize a form of use zoning for a racial purpose. In 1885, the city enacted a set of regulations for laundries operating in residential areas in an attempt to keep Chinese residents (who owned nearly all of the laundries and typically lived above them) from white neighborhoods. The law was invalidated by the Supreme Court in the 1886 case *Yick Wo v. Hopkins* in which the Court found that a law which is race neutral on its face may still violate the 14th amendment if administered in a prejudicial manner.

comprehensive zoning plan in 1926 that included racial designations for different city zones (Connerly 2005). Atlanta's 1922 revision of the zoning ordinance combined zoning categories of land use and building regulations with racial designations. For instance, the city's master zone map noted that, "unless otherwise designated on this map, all areas designated as dwelling house districts are also class H1 height districts and white race districts." Other areas were designated as "colored district and an apartment house district" or "colored district and dwelling house district."[66] In 1929, the zoning code was again revised, this time including a prohibition on occupying a home on a street where the majority of residences were occupied by persons whom the resident was forbidden to marry by law (Meyer 2000). Eventually, the court ruled against these ordinances and by the 1930s segregationists had dropped the racial designations in favor of comprehensive zoning.

As the court struck down plans that endorsed outright racial segregation, the case for other forms of zoning had been building. A series of judicial decisions established the bounds of permissible approaches to regulating the uses and size of buildings. For instance, the court determined that exercise of police power (e.g. the authority to regulate behavior and enforce order), "must be reasonably adapted to the purpose of protecting some interest of the community," (C.C.S. 1925 p417) and that nuisance regulation and other use restrictions, "must bear a substantial relation to the public health, safety, morals or general welfare" (Monchow 1928, p323). Zoning ordinances spread rapidly throughout the 1920s, particularly after the Supreme Court determined that comprehensive zoning would not require cities to compensate owners for losses in prospective land values in the 1926 case *Euclid v. Ambler Realty Company*.

[66] https://cityloci.files.wordpress.com/2014/07/6-atlanta-19291954.pdf

Zoning adoption was also propelled by the Republican-led federal government. In 1922, under the direction of Secretary Herbert Hoover, the Department of Commerce issued a template for state enabling laws in the Standard State Zoning Enabling Act. The Act was published in 1924 and a revised edition was released in 1926. Thus, while Republicans tended to oppose zoning in the South, they were frequently the drivers elsewhere. In Boston, Republicans were shut out of city government by the powerful Democratic organization, leaving them to pursue zoning laws through the Massachusetts state legislature instead (Kennedy 1992, p113).

The arguments surrounding the adoption of comprehensive zoning were broad but imbued with municipal Progressivism's race and class prejudices (Bridges 1997, Trounstine 2008). Comprehensive zoning supporters highlighted benefits such as the "adequate provision of light and air," "stabilization [sic] and protection of property values," "protection and maintenance of the home and home environment," "to apply the most up-to-date methods of sanitation and hygiene, "simplifying the problems of street traffic regulations," and the prevention of congestion (A.C. Holliday 1922, p217). By separating industrial, commercial, and residential uses into separate districts each with standard regulations regarding the use, height, and area of buildings, zoning would make, "every town, city or village a more orderly, convenient, economic and attractive place in which to live and work," (A.C. Holliday 1922, p218,). One key to ensuring high property values and orderly living arrangements was the ability for zoning ordinances to prevent noxious uses from polluting residential neighborhoods (Fischel 2001). Apartment buildings constituted one such noxious use.

In *Euclid v. Ambler*, Justice Sutherland explained that the apartment house is often a, "mere parasite, constructed to take advantage of the open spaces and attractive surroundings... interfering by their height and build with the free circulation of air and monopolizing the rays of

the sun…depriving children of the privilege of quiet and open spaces for play enjoyed by those in more favored localities…until, finally, the residential character of the neighborhood and its desirability as a place of detached residences are utterly destroyed. Under these circumstances, apartment houses, which in a different environment would be not only entirely unobjectionable but highly desirable, come very near to being nuisances." (p394-395).

In allowing the protection of single-family home neighborhoods, *Euclid* laid the groundwork for the long-term shift from a country segregated by race to one that became increasingly segregated by income. In the early 20th century, race and income were so strongly overlapping that denying apartment buildings in a neighborhood of single-family homes would also largely prohibit blacks and many immigrants from residency. Making this point, Bruno Lasker, editor of Survey Magazine asked:

> "Why, in this country of democracy, is a city government, representative of all classes of the community, taking upon itself to legislate a majority of citizens – those who cannot afford to occupy a detached house of their own – out of the best located parts of the city area, practically always the part with the best aspect, best parks and streets, best supplied with municipal services and best cared for in every way? Why does it deliberately 'segregate' the foreign-born who have not yet become sufficiently prosperous to buy or rent a home under building regulations which preclude the possibility of inexpensive development and construction?" ("Unwalled Towns," *The Survey*, Volume 43, 1920, p677).

Lasker suggested that the answer to his question was the dominance of politics by wealthy property owners who sought to employ, "public power for the purpose of protecting sectional interests" ("The Issue Restated," The Survey, Volume 44, 1920, p278). Segregation enforced via zoning was a means to accomplish this end. In cities like Chicago, Kansas City, and Los Angeles, some of the most powerful voices in support of zoning were homebuilders and real estate boards who stood to gain monetarily from segregation (Gotham 2000).

With such wide-ranging positive effects for powerful interests, it is easy to see why zoning became so popular. Yet, by the close of the 1920s, many cities had not yet adopted zoning plans. I have argued that zoning was a tool that enables elected officials to make it easier to limit the distribution of public goods to certain constituents and to ensure high property taxes, and that it was successfully implemented where zoning supporters had political power. In order to provide more systematic evidence of this argument, I collected data on all of the cities that enacted *zoning ordinances* between 1900 and 1930. I gathered racial zoning information from several reports including Rice (1968), Connerly (2005), Silver (1997), and numerous issues of the NAACP's *Crisis Magazine*. To encode general zoning plans, I drew on an article published in *The American City* by Norman Knauss in 1929, which listed the years that zoning ordinances were enacted. Knauss reports having sent a survey to all municipalities with the authority to enact zoning. His list includes 768 municipalities that reported having an ordinance. I coded the city year in which zoning was enacted as a 1 and years leading up to that date as a 0. Cities exit the analysis once they enact zoning. Cities that were included in the Census but had no zoning law by 1929 are coded 0 for the entire time period. Zoning is my dependent variable. To these data, I merged city spending and demographic data culled from the Census (which are described in Chapter 1).

My primary independent variables are per capita total *Expenditure* and *Property Taxes*. I log the total expenditure variable because the data have a strong rightward skew. I expect both of these variables to be positively correlated with zoning. Where spending and property taxes were higher, local officials would have a greater incentive to protect the existing distribution of public goods and the total tax revenue. I include two additional political variables – the county-level *Republican presidential vote share* (linearly interpolated for non-election years) and county

level *Turnout* of age-eligible voters.[67] Republican vote share is a rough proxy for the degree of support for regulatory policy, of which zoning was an example. I expect that greater Republican support will be associated with a higher likelihood of implementing zoning – except in the South. A range of voting restrictions were in place throughout the time period under consideration (Keyssar 2000) and I include the turnout of the age-eligible population to capture the permissiveness of the electoral environment. This measure is preferable to including state level laws like the poll tax or literacy test because it allows for sub-state variation in the electoral setting. Generally, higher turnout is associated with greater participation of the poor and people of color (Hajnal 2010); populations that both tended to be opposed to zoning plans and stood to lose from their implementation. Thus, I expect that where turnout was higher, the likelihood of enacting zoning was lower.

A wide range of alternative explanations for the adoption of zoning were proposed by contemporary observers and later analysts of the movement, many of which are correlated with the political factors I seek to test. Writing about racial segregation laws, Woodward (1955) argues that the economic depression at the end of the 1890s led to "aggression against the minority race" (p81). To account for this possibility, I include a measure of the share of the total population that was *Unemployed*, linearly interpolated from the Census of Population and Housing. Fischel (2004) claims that zoning adoption followed the invention of trucks and busses, which made it feasible for businesses and apartment buildings to be built in residential and suburban areas, away from rail lines. I include per capita spending on *Roads*, which include street paving, street cleaning, and street lighting to capture differences in vehicular accessibility. In the "History of Zoning," Gordon Whitnall explains that, "the practice of zoning began…when

[67] This denominator includes men over the age of 21 until 1919 and both women and men over the age of 21 in 1920 and later elections.

the concentration of population in cities began to be pronounced" (1931, p2). The "urge for zoning" he goes on to say, "has arisen from the desire and the necessity to bring some order out of the chaos that has resulted from the anarchistic development of our cities." I include the *10 year rate of change* in total population and population *Density* (persons per acre) to capture urbanization. To measure threats of disease and conflagration, I include per capita spending on *Health care* and *Fire-fighting*.

As described above, contemporary supporters of segregation ordinances often asserted the protection of white, single-family neighborhoods as the primary goal. To measure the social threat of black and foreign populations, I include the share of the population that is *Black*, *Foreign Born White*, and *Foreign Born Non White*. To measure the threat of lower-income (apartment dwelling) populations I include the share of the population *Renting* their homes. To capture the presence of noxious industry that might be better contained in a zoned city, I include the share of the employed population working in *Manufacturing*. This variable also captures an argument presented by Connerly (2005): that industrialists preferred to maintain segregated cities in order to dampen the threat of union organizing across racial lines.

Many scholars (e.g. Woodward 1955, Myrdal 1944, Blumer 1958) understand segregation as a mechanism to bolster hierarchical racial control, as social distance may preserve the relative status advantage of whites. For instance, Wade (1967) argues that segregation was, "rooted in the white's need for discipline and deference," and that it, "provided public control to replace dwindling private supervision of the master over his slave" (p278). If this is the case, we should expect that cities with existing patterns of segregation would be most likely to institutionalize the practice. It is also possible, however, that cities with high levels of segregation would have had no need for legislation (see Silver 1997 on Roanoke). To adjudicate

between these two possibilities, I include a dummy variable coded 1 if the city had *Segregated Schools*. This variable is encoded from Johnson (2015) who characterizes states as requiring segregation, permitting segregation, prohibiting segregation, or with no segregation statutes. My variable is coded one for states that require segregation, .5 for states permitting segregation, and 0 for all others. Bobo, Kluegel, and Smith (1997) argue that the political institutionalization of Jim Crow ideology was driven by the needs of the Southern economy, particularly the exploitation of black agricultural labor. On the other hand, Godsil (2006) suggests that whites with a significant stake in retaining a large black laboring class may have opposed racial zoning, as such ordinances might lead black workers to leave the city. To account for either possibility, I include for the share of the workforce employed in the *agricultural sector*. If Bobo et al.'s theory applies to zoning, we would expect a positive relationship between agricultural dominance and zoning. We'd expect the inverse if Godsil is correct.

My observations represent 4293 city-years from 240 cities. All spending data are inflation adjusted and linearly interpolated. Census data are linearly interpolated as well. I run logistic regressions with errors clustered by city. I include fixed effects for region, which means that these comparisons are all within the same area of the country. That is, the regressions analyze the effect of city expenditures on the adoption of zoning in each of four regions – West, North, Midwest, and South. Column 1 shows the base model with no controls. Column 2 includes all of the above-described controls. In Column 3, I change the dependent variable to focus on racial and comprehensive zoning. Here, the dependent variable is coded 1 when the city adopts either race zoning or comprehensive zoning and is coded zero otherwise. In this analysis, I present an interaction between Republican vote share and region to show how party

politics differed in the South. These results are presented in Table 2.1 and summary statistics are shown in appendix Table A2.1

Table 2.1: Effect of Local Political Factors on Zoning Implementation

	Column 1		Column 2		Column 3 Race and Comprehensive Zoning Only	
	β	P>|z|	β	P>|z|	β	P>|z|
Expenditure $ Per Capita (logged)	0.787	0.008	1.255	0.000	1.354	0.000
Property Taxes $ Per Capita	0.052	0.000	0.049	0.007	0.072	0.000
Presidential turnout	-2.094	0.005	-3.18	0.001	-2.639	0.015
Republican Vote Share	5.133	0.000	5.249	0.000	11.292	0.002
% For. Born White			-4.645	0.011	-5.797	0.003
% For. Born Non White			-24.709	0.011	-26.98	0.065
% Black			-2.162	0.359	-3.398	0.177
Highways $ Per Capita			-0.330	0.027	-0.292	0.047
Health $ Per Capita			0.234	0.482	-0.322	0.505
Fire $ Per Capita			0.224	0.203	-0.052	0.759
Density			-0.006	0.637	-0.010	0.499
% Renters			2.136	0.170	5.743	0.001
% Employed in Manufacturing			2.643	0.049	3.361	0.027
% Employed in Agriculture			5.527	0.000	6.735	0.000
10 year population growth rate			-1.355	0.026	-2.242	0.001
School segregation			1.276	0.068	1.150	0.115
% Unemployed			5.338	0.052	5.788	0.073
Midwest	-0.621	0.019	-1.567	0.000	0.442	0.860
North	-0.883	0.000	-1.788	0.000	1.868	0.441
South	0.313	0.349	-1.628	0.056	4.287	0.089
North * Rep. Vote Share					-1.069	0.786
Midwest * Rep. Vote Share					-4.805	0.207
South * Rep. Vote Share					-8.347	0.030
Constant	-8.436	0.000	-8.073	0.000	-15.241	0.000
N	4293		3514		3687	
R^2	0.123		0.178		0.170	

Note: Logistic regressions; Robust Standard Errors clustered by city

Table 2.1 offers strong support for my claim that cities with greater public goods expenditures and more property tax revenues were more likely to implement zoning ordinances. With all else equal, shifting from the minimum per capita expenditure (about $4) to the maximum (about $476), changes the probability of adopting a zoning ordinance from 0.004 to 0.15. Similarly, cities with the lowest property taxes per capita (about $2) rarely adopted zoning ordinances, while those with the highest taxes ($67 per person) had around an 18% chance of implementing zoning. Where turnout of the voting age population was higher, zoning was less likely to be adopted. This result supports Toll's (1969) claim that, "the demand neither for zoning nor for planning had grown out of any widespread outcry in the cities of the United States" (p199). Zoning adoption appears to have been led by the Republican Party, except in the South, where Republican voting strength limited the likelihood of adoption of comprehensive and racial zoning ordinances.[68] These data fit the historical narrative presented above well.

In addition, many of the control variables suggest interesting patterns. For instance, there is no evidence that larger racial and ethnic minority populations drove zoning adoption. Nor did greater threats to public health or conflagration increase the likelihood of zoning. Contrary to Fischel's prediction, zoning was not more common in cities with more spending on roads. Economic factors appear to have played a more important role. Zoning adoption was more likely in cities with higher unemployment and with greater shares of the workforce employed in manufacturing and agriculture. It was also more likely in cities with more renters (particularly in the case of comprehensive and racial zoning). This conclusion is bolstered by a secondary analysis in which I add a measure of renter segregation in 1900 for 42 cities. Where renters were

[68] Cities with reformed institutional structures were not more likely to adopt zoning. In fact, nonpartisan cities were somewhat less likely to adopt. This effect is largely driven by cities in the South where nonpartisan laws may have advantaged Republicans.

more segregated from homeowners, zoning was much more likely to be implemented. This finding suggests that homeowners were more supportive of zoning measures when they lived in more defined neighborhoods to protect. It is also clear that zoning ordinances were much more likely to be enacted in places that had a preference for segregation. Where segregated schools were the law, cities were more likely to adopt zoning. In additional analyses I find that cities with marked segregation at the turn of the Century, particularly in the South, were also more likely to adopt zoning. These results support the contention that zoning was a mechanism used to reinforce existing racial hierarchies. In the next section I provide evidence that this was precisely its effect.

Zoning Generates Segregation

As Chapter 1 revealed, race and class segregation existed prior to the introduction of public policy measures that would separate residents and land uses. The history of private mechanisms producing segregation is well understood (e.g. Jones-Correa 2000, Meyer 2000, Burgess 1994, Myrdal 1944). Blacks, immigrants, and the poor tended to live in areas that were removed from native white middle class residents for a variety of reasons. Rabinowitz (1974) explains, "some of the housing segregation was voluntary: Negroes sought proximity to their jobs, welcomed the freedom from white surveillance, and enjoyed the company of other blacks" (p98). More important was "black poverty, which limited housing options" and "white pressures to keep blacks out of their neighborhoods" (p98). Restrictive covenants, clauses written into property deeds specifying restrictions on the use of the property, were widely used to bar undesirable neighbors from occupying properties starting in the late 1880s (Fogelson 2005). Mortgage discrimination and real estate steering were institutionalized in the early 1900s (Helper 1969). However, Hayward (2013) explains that the problem with relying on black poverty or

restrictive covenants to maintain segregation was that the market was susceptible to encroachment, requiring coordination and constant vigilance against potential violators (Brooks 2002, McAdams 2008). Marshaling the power of municipal governments to restrict land use offered developers and property owners the promise of a protected investment.

Evidence indicates that zoning adopted in the early 1900s followed patterns created by private actors (Burgess 1994, Tretter 2012). Writing in 1929, M. T. Van Hecke explained, "zoning programs are frequently influenced by restrictions in deeds. Where a very substantial area has been set aside for a high type use through the medium of deed restrictions, and that area is sufficiently large and geographically distinctive, zoning officials ordinarily recognize the character of the development and classify that section accordingly, so that the objectives of the statutory and deed restrictions are the same" (p420). Both supporters and opponents of zoning argued that the new laws would simply reinforce patterns produced by the market. Supporters, like Robert Whitten, creator of Atlanta's post-*Buchanan* comprehensive zoning plan, claimed that zoning would serve to lessen racial antagonism and economic loss by making the future of development more predictable as it enforced existing segregation patterns (Toll 1969 p262). Opponents suggested that zoning would add unnecessary (and some argued, unconstitutional) regulation when restrictive covenants were perfectly suited to the job of preserving neighborhoods and property (Virginia Law Review 1928, Ellickson 1973, Hayward 2013 pp118-119, Denzau and Weingast 1982, Berry 2001).

Aside from freezing private decisions in public policy, zoning also had the potential to generate race and class segregation through implementation. Ostensibly, zoning is undertaken in the interest of the city as a whole, but this, "depends entirely upon the way in which the work is done" (Van Hecke 1929, p414). This is because zoning, as an administrative task, requires

innumerable small decisions by municipal officers who may, consciously or unconsciously, bias outcomes toward some groups and away from others. E.T. Hartman (1925) explains, "chief among the problems are the granting or refusal of permits in accordance with the law, the decisions of the board of appeals in appealed cases, and appeals from either or both by interested parties" (p162-163). As is true of any regulation, zoning serves political purposes (Denzau and Weingast 1982). The discretion inherent in applying zoning laws meant that local officials could deny permits to builders who sought to house nonwhite or poor families and/or make exceptions for developers serving white and upper class residents (Bayor 1996, Meyer 2000). Abrams (1955) explains, "those who build for whites can get a modification pro forma. But the moment an unwelcome group appears, the officials stand firm" (p210). Until 1949, the Federal Housing Administration officially encouraged the use of zoning to generate race and class segregation (Stearns 1962). Valuators were instructed that, "the best artificial means of providing protection from adverse influences is through the medium of appropriate and well-drawn zoning ordinances" (Federal Housing Administration 1936, *Underwriting Manual*, Part II paragraph 227). Zoning was understood to protect locations "against declines in value or desirability" (section 306(2)) by preventing the, "infiltration of business and industrial uses, lower class occupancy, and inharmonious racial groups" (paragraph 229).

As Berry (2001) notes, providing evidence of the effects of zoning on segregation has proved challenging because zoning is ubiquitous today.[69] But as the first section of this chapter revealed, in the first decades of the 20th century, zoning adoption was variable. I argue that this variation shows that early zoning adopters became more segregated cities – even accounting for the degree of segregation that existed when zoning laws were adopted. My dependent variables

[69] Berry (2001) takes advantage of the lack of zoning laws in Houston and their presence in Dallas to show that private controls – particularly covenants – produce the same outcomes as zoning laws.

in these analyses are *Change* in the level of *Race* and *Class segregation* between about 1900 and 1970. More specifically, I subtract the level of segregation at the earliest point in my dataset from the 1970 of segregation of non-Hispanic whites and renters. The earliest measures for racial segregation are from 1890, 1900, or 1910. For renter segregation, the earliest measure is 1900 for most cities.[70] As explained in Chapter 1, the segregation of renters is an imperfect measure of class segregation – but it is the only measure that allows me to capture change over time.

My primary independent variables are drawn from the data described for Table 2.1. I expect that racial segregation will be most closely linked to racial zoning and comprehensive zoning (as the historical discussion indicated), while class segregation will be tied to all forms of zoning. In the analysis of racial segregation, my independent variable is a dummy variable noting whether a city adopted either a race based or comprehensive zoning ordinance in the period 1900 and 1930. These *Early Zoning Adopters* are coded 1, and cities that did not adopt racial or comprehensive zoning are coded 0. In the analysis of renter segregation, cities are coded 1 if they adopted any type of zoning ordinance between 1900 and 1930 and zero otherwise. I control for the *Change in City Population* between the earliest point of measurement for each city and 1970. Table 2.2 presents these results.

[70] I have data in 1900 for 49 cities. To increase the number of usable observations, I include the level of renter segregation in 1940 for 14 additional cities. The correlation between renter segregation in 1900 and 1940 is .8676. The results are nearly identical (though less precise) using only the data from 1900.

Table 2.2: Zoning's Effect on Race and Class Segregation

	Change in Racial Segregation 1900-1970		Change in Renter Segregation 1900-1970	
	β	P>|z|	β	P>|z|
Early Zoning Adopter	0.133	0.001	0.036	0.061
Change in City Population	0.000	0.002	0.000	0.000
Constant	0.057	0.103	0.026	0.181
N	88		63	
R^2	0.198		0.222	

Note: OLS Regressions

The results in Table 2.2 are striking – cities that were early adopters of zoning ordinances grew more segregated over the next 50 years compared to cities that were not early adopters. Around 1900, cities that adopted zoning had very similar racial segregation rates to non-adopting cities (0.265 for adopters and 0.287 for non-adopters). By 1970, cities that adopted early zoning ordinances had segregation levels about 10 points higher on average (0.489 compared to 0.390). Zoning also exacerbated renter segregation. Cities that were not early adopters saw about a 4 percentage point increase in renter segregation between 1900 and 1970 compared to an 8 percentage point increase in cities with zoning.

Furthermore, zoning had significant consequences for property value inequality (as its promoters had hoped). To measure property value inequality, I created a *Property Value Gini Index* built from median home values at the census tract level in 1970. Cities in which all census tracts have very similar 1970median home values have a low score on this measure, while cities that witness inequality in property values from neighborhood to neighborhood have a high score. Regressing the property gini on the dummy variable for early zoning adoption, including state fixed effects produces a coefficient of 0.09 (SE=0.003). Cities without early zoning had an average 1970 property gini of 0.04, compared to 0.13 among early zoning adopters. This difference is greater than a standard deviation on the gini index.

Of course, zoning was not the only mechanism available to local governments to promote race and class segregation. One of the most successful strategies of directing residential locations without force was the placement of segregated amenities. Austin, Texas was a pioneer in this practice. The city's 1928 comprehensive zoning plan found that, "the Negroes are present in small numbers, in practically all sections of the city, excepting the area just east of East Avenue and south of the City Cemetery. This area seems to be all Negro population" (page number). So, the plan recommended that, "all facilities and conveniences be provided the negroes in this district, as an incentive to draw the negro population to this area." This strategy would, "eliminate the necessity of duplication of white and black schools, white and black parks, and other duplicate facilities for this area" (Koch and Fowler 1928, p57). Soon after the adoption of the plan, Austin's city council pursued this approach, providing a park, school, and sewer connections for African Americans only in this one section of the city. The council went on to duplicate the strategy for Latinos (Tretter 2012). In the 1940s and 50s (as I discuss in Chapter 4), the siting of segregated public housing followed a similar pattern.

Another tactic cities used to shape minority residential patterns was the use of eminent domain and the placement of public improvements. Abrams (1955) reports, "Sites abutting Negro developments have been acquired for railroad stations, incinerator dumps, urban redevelopment, public housing projects, roads, and similar improvements. These improvements sometimes tend to cut off the minority area from the rest of the city and stem the expansion of its living space" (p212). Such decisions became increasingly frequent as the federal government provided funds for redevelopment. As I show in Chapter 4, cities that spent more urban renewal dollars also became more segregated.

Cities also engaged in several strategies that enhanced/protected private decisions generating segregation. Chief among these was the refusal to deploy police forces to protect blacks from white violence when they sought to buy or rent homes in white neighborhoods. In many places, police routinely prevented the poor and people of color from setting foot in wealthy white areas at all (Meyer 2000, Myrdal 1944).[71] In some places, city governments took actions to aid the effectiveness of private deed restrictions (Hirsch 1983). For example, the mayor of Baltimore established a special Committee on Segregation to help coordinate deed restrictions in white neighborhoods. The committee included the city's building inspector, representatives from the health department, real estate agents, and neighborhood improvement association members (Meyer 2000).

Conclusion

This chapter has provided the first piece of quantitative evidence along with qualitative historical references that suggest that local governments influenced patterns of segregation by taking into consideration public goods provision as well as the wishes of wealthy business elites and white property-owning constituents. Local governments institutionalized prejudicial behavior and promoted segregation through the use of zoning ordinances.

Political elites enacted zoning ordinances in order to control the distribution of public goods in the city. They justified their zoning and segregation legislation with the argument that the poor and minorities had habits that were harmful to public health. One of the main goals of zoning ordinances was to create property values that were stable; this was highly supported by influential groups including home and landowners who did not want "others" settling in their

[71] As was the case with zoning, the use of police to support segregationists was variable. For instance, Meyer (2000) reports several examples of police providing support for black residents in New York City, St Louis, and Baltimore.

areas and decreasing the value of their investments. Local governments had no objections to keeping the property values high and stable, as this allowed them to refrain from raising taxes.

One major consequence that resulted from enacting zoning ordinances was that cities that adopted them early became more segregated in terms of both race and class lines. When cities restricted land use and the location of specific buildings, this created areas that were homogenous, leading to the reinforcement of inequality and social divisions.

In 1917, the Supreme Court ruled that zoning ordinances were indeed unconstitutional. This led many cities to turn their attention to comprehensive city plans and other forms of zoning that did not make outright segregation obvious. New comprehensive city plans were fueled by continuing race and class prejudice, and influenced the long-term shift from racial segregation to segregation by income level.

The historical references presented in this chapter support the argument that local government politicians used zoning as a mechanism to control the distribution of public goods towards their supporters and away from others, as well as create and maintain high property values in their cities. Zoning was an implemented effectively in areas where those in favor of zoning had political power to turn racial and class prejudice into legislation. Cities that were early adopters of zoning ordinances grew to be ten percent more segregated over the following fifty years than did cities that were not early adopters. The results also illustrate that zoning ordinances doubled the amount of renter segregation. In these early adoption cities, property values would also become more unequal by 1970.

Local governments used zoning ordinances as a mechanism to solidify, through institutionalization, existing racial hierarchies and prejudice, and this practice has had long-lasting effects. When cities could have used zoning to enhance the life of all residents, local

government officials catered to the private interests of their supporters and utilized policy tools including the placement of segregated amenities, public improvements, eminent domain, and redevelopment funds to protect and increase property values. The consequence of these practices was the generation of long-standing race and class segregation and prejudice.

Chapter 3: Inequality in Public Goods Provision, 1900-1940

Throughout the first decades of the 20th century, neighborhoods became increasingly homogenous along both race and class lines. By 1940, white/nonwhite segregation had increased by an average of 63%, while renter segregation increased by 54%.[72] Chapter 2 provided evidence that cities pursued race and class segregation in an effort to ensure the protected delivery of public goods to constituents with political power – namely land owners, realtors, developers, and white homeowners. Segregation served this goal because both local public goods and local political representation have a spatial component. While it is difficult to deny particular households access to sewer lines or a local public park, it is much easier to deny particular neighborhoods. Thus, as segregation geography shifted, so too did public goods inequalities.

Nothing about the existence of residential segregation necessitates inequality in service provision; it only makes it easier to produce if it is what city officials prefer to do. In fact, early planning advocates often argued that taking race into account when developing city plans was the key to *protecting* black communities and ensuring that they received, "all necessary municipal services – paving, city water, sewers, electricity, fire, and police protection…" (Knight 1927, p137).[73] While it was clear that public facilities would be separate, some planners insisted that there would be, "equal opportunities and facilities" (Virginia Law Review, 1928, p526). In most places though, inequality was the norm as, "housing segregation…permit[ted] any prejudice on the part of public officials to be freely vented on Negroes without hurting whites" (Myrdal 1944, p618).

[72] As described in detail in Chapter 1, renter segregation remained at lower levels than race segregation throughout this period.
[73] Knight, Charles. 1927. Negro Housing in Certain Virginia Cities, Publications of the University of Virginia Phelps-Stokes Fellowship Papers, Number 8

As Abrams (1955) explains, "though often merged into a single neighborhood, the ghetto was not always a slum nor the slum always a ghetto….the slum-ghetto was created when those of a single ethnic minority group lived not only in a ghetto but also in bad housing" (p76). Local governments contributed to the development of slum-ghettos by providing worse city services to neighborhoods populated predominantly by certain groups. Myrdal (1944) explains that the argument offered in support of these unequal allocations was the (erroneous) belief that whites paid all of the taxes, and so were therefore entitled to all of the benefits. It followed that, "whatever [Negroes] get is a charitable gift for which they should be grateful" (p336).

Over the long run, this pattern of government behavior contributed to the development of negative stereotypes about the people who lived in the slum-ghetto (e.g. that racial minorities or the poor, "*cause[d]* the deterioration of the places in which they live[d]" Hayward 2013, p64, emphasis in original). This is what Glenn Loury (2002) refers to as a "politically consequential cognitive distortion" because the disadvantage observed among a group of people is assumed to be, "intrinsic to that group when, in fact, that disadvantage is the product of a system of social interactions," which then leads observers to be opposed to policy solutions or systemic reform (p26). It was in the early part of the 20th century that the foundation for continuing inequality in the 21st century was laid. By building inequality into the physical landscape, cities added, "unprecedented durability and rigidity to previously fragile and fluid [social] arrangements" (Torres-Rouff 2013, p257).

In Chapter 2, I provided evidence that political power in the hands of opponents could slow or inhibit the enactment of such policies. A similar pattern existed with respect to the distribution of benefits. In many cities, political participation of lower socio-economic status groups and racial minorities limited the degree to which public goods were allocated unequally.

When these groups were able to assert political power through voting strength or in official positions, they received more benefits from municipal governments.

In this chapter, I show that between 1900 and 1940, neighborhoods that were identifiably poor or inhabited by minorities were allocated lower quality services including road paving, public health efforts, and sewer extensions. I draw on detailed data from Atlanta, Birmingham, Baltimore, Boston, Chicago, and Philadelphia to provide this evidence. Where relevant, I discuss mobilization efforts on the part of underserved groups that limited the extent of unequal allocation. I also show that in the case of sewer connections, this inequality persisted into the latter half of the century. Using data from all places included in the Census in 1970, 1980, and 1990, I provide evidence that where minorities and renters were more concentrated (e.g. in more segregated cities) they were less likely to be connected to public sewers.

A common argument promoted in the literature, as early as the 1930s, was that class, not race, was the more important determinant of inequality. A 1932 report commissioned by President Hoover stated, "These conditions of Negro housing in our cities are not the result of any willful inhumanity on the part of our society. On the contrary, they merely emphasize the present shortcomings of our individualistic theory of housing…The Negro's housing problem is part of the general problem of providing enough housing of acceptable standards for the low-income groups in our society" (Johnson 1932, p.viii). Myrdal (1944) also argued that, "in the North there is little, if any, direct discrimination…What inequality there is in the Negro's consumption of public services in the North is due mostly to poverty, lack of education, and other disabilities which he shares with other lower class persons in the region" (p335). Thus, the belief that blacks endured worse conditions than whites solely because of their lower socio-economic status, was widespread. As will be shown throughout this book, this was not true in

either the historical or modern period, regardless of the measures used or the region studied. Race and class exert powerful, independent effects on distributional outcomes.

Jim Crow and Public Goods Inequalities

Until the mid-1950s (and in some places long after), many Southern (and some Northern) cities generated inequalities in public goods by segregating access directly and then underfunding nonwhite services. Of all of the public goods residents sought to secure, none was as important as schooling. As of 1947, all southern states, along with Arizona, Indiana, Kansas, and New Mexico required or allowed segregation of schools (CQ Researcher 1947). Until the mid-1930's, about 75% of public school revenues were completely locally derived (Snyder 1993).[74] In the post-war period state and then later, federal government contributions rose. According to the data described in Chapter 1, localities spent an average of $103 (in 2012 dollars) per capita on schooling in 1902, representing about 35% of total expenditures. Per capita spending rose dramatically over the next 25 years (to $203 in 1927), but not as quickly as other expenditures. In 1927, schooling represented about 31% of local budgets. Until (and in some places even long after) *Brown v. Board of Education* was decided in 1954, racial segregation in schools was generated directly – that is, *residential* segregation was not needed to

[74] Technically, most schools in the United States are governed by approximately 13,000 independent, single purpose governments called school districts, rather than by cities. Not only are the governments that provide schooling and garbage service different entities, with separate budgets and separately elected officials, they do not often share the same boundaries. Today, only about one quarter of cities over 50,000 people have boundaries that are coterminous with a single school district (Fischel 2007). However, the 1902 Census Statistics of Cities reports that, "In most cities [included in the report] the schools are under the control of the city government, or of a school district, practically coterminous with the city" (p21). In his study of modern district boundaries, Fischel (2007) confirms that older cities are much more likely to have coterminous boundaries. It is for this reason that I include a discussion of schooling in this section. The figures cited in this paragraph combine revenue and expenditure for the municipality and the district as reported by the Census. However, it is not proper, even during this early period, to think of expenditures on schooling as being exchangeable with expenditures on other types of services. That is, increasing school spending did not directly impact funds available for policing, although one might imagine a theoretical budget constraint that the voters could impose on all governments. Due to a lack of clarity both theoretically and statistically, for the most part, I do not consider school district revenue and expenditure as part of the municipal budget in the remainder of this book.

ensure that whites and Blacks attended different schools. This was true in both the North and South. As one observer explained, "contrary to the general impression, this doctrine [of segregated schools] is of Northern and not of Southern origin. It originated in fact in the Quaker state of Pennsylvania and the abolitionist state of Massachusetts, and; although it repudiates any implication of a superior and an inferior race and insists on equal opportunities and facilities…" (Virginia Law Review 1928, p526). Litwack (1961) found that, "by the 1830s, statute or custom placed Negro children in separate schools in nearly every northern community" (p115).

In 1912, the Census reported expenditure data on schools separated by race in 40 communities. Unsurprisingly, white schools were better funded than black schools. I estimate that these cities spent about $4 per white resident and about $2.6 per black resident (in 1912 dollars).[75] However, the ratio of spending in black to white schools differed by region. While Northern black schools were not, as the Virginia Law Review implied, equally funded – it was the case that the disparities were greater in the South. For cities in the Midwest, the ratio was 0.846, compared to 0.685 in the Northeast, and 0.573 in the South.[76] School enrollments were also lower among black children. For the 1902-1903 school year, about 56% of black children were enrolled in school in Southern states, compared to 72% of white children (DuBois and Dill 1911, p24).[77] In some places with substantial black populations, no black schools were provided

[75] This is an estimate because I used linear interpolation to estimate the total white and Negro population in each city in 1912. The figure represents the total amount of funding for white and Negro schools reported by the Census divided by my population estimates.

[76] It is important to note that these data only represent a fraction of the communities with black schools or significant numbers of black school aged children (see discussion on page 122 in Financial Statistics of Cities Having a Population of Over 30,000: 1912). The 40 communities included in this special Census report spent less overall on schooling compared to other communities (about $3.6 per capita vs. $4.8 per capita). Compared to data reported in DuBois and Dill (1911), these figures appear to understate the discrepancy in funding between black and white schools.

[77] W.E. Burghardt DuBois, PhD and Augustus Granville Dill A.M., editors, The Common School and the Negro American: Report of a Social Study Made Under the Direction of Atlanta University, No. 16.

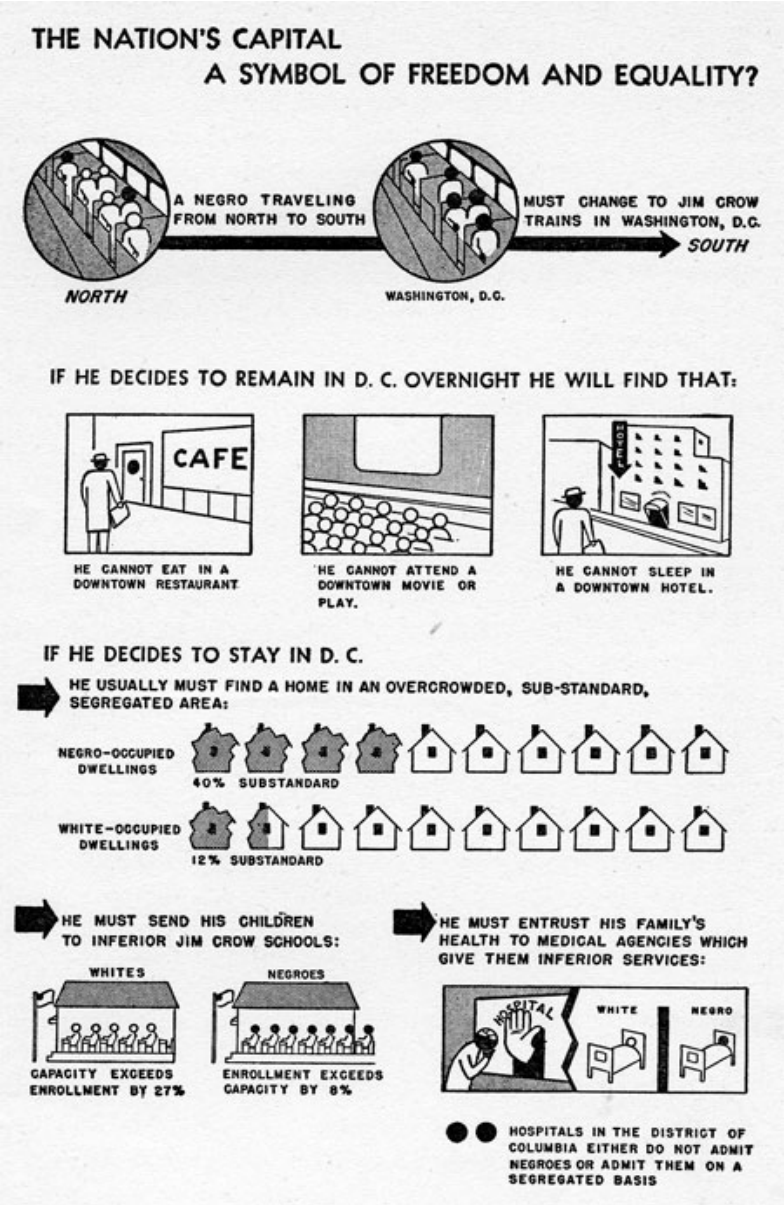
at all (Dubois and Dill 1911). Indeed, as Rabinowitz (1978) has argued, segregated schools actually represented an improvement in many communities because the alternative was complete exclusion – not integration.

Black schools had fewer teachers per child, shorter school years, and inferior physical infrastructure (DuBois and Dill 1911, Myrdal 1944). Teacher pay also differed substantially. For instance, in 1908 Georgia, the average teacher salary for whites was $45.47 compared to $26.37 for blacks (DuBois and Dill 1911). Despite similarly sized populations of white and black school children, Atlanta provided only 15 black grammar schools in 1920 compared to more than 40 grammar schools for white children. But not all white schools were treated equally. Schools serving poor whites (largely immigrants) were also, "older, less well equipped and often more overcrowded" (Myrdal 1944, p338).

Everywhere, blacks paid property taxes that were used to support white schools. Myrdal (1944) explains, "whenever the proportion of Negroes in the population is high, and the standard of Negro schools is kept well below that of white schools, the white educational system can derive substantial gains from segregation. Segregation makes discrimination possible; discrimination means lower expenditures for Negro schools, and the white population thus gets a vested interest in separation" (p341). In 1917, the Negro-at-Large series sought to catalogue reasons for the increasing Northern migration among Southern Blacks. The results of the organization's survey were printed in the Atlanta Independent. The third most important reason (after unhappiness with Jim Crow laws and disenfranchisement) dealt with inequality in school funding. The survey stated, "At present Negroes pay their proportion of taxes directly and a big portion in-directly through their rents, yet Negro schools receive in some cases less than 30 per cent of their just desserts" (reported in West 1976, p14).

However, the extent of inequality differed from place to place. DuBois and Dill (1911) report that in Washington D.C., where blacks sat on the Board of Education and held an assistant superintendent position, "there is no discrimination in the pay of teachers or in the requirements for teachers or in the course of study laid down" (p32). St. Louis and Baltimore both offered black high schools during this period. A 1954 study of inequality in education funding in St. Louis found that black schools were underfunded given their enrollment, but the difference was only about 5% and teacher pay was nearly identical (Russell 1954). In Atlanta, an active chapter of the NAACP sought to mobilize black voting power to improve public services in general and schooling in particular. In spite of a series of restrictions on voting (e.g. the white primary, poll taxes, etc.), the organization was able to register enough blacks to vote to sway some elections (Bacote 1955). In 1919, black Atlantans organized to defeat a bond package that would have solely funded white schools. So, in 1921 sponsors of the referendum sought black support in exchange for a black high school (West 1976).

Schools were not the only public good that was segregated directly during this period. Recreational facilities like parks, swimming pools, bath houses, and golf courses were also designated for white use only in many Southern cities. In Atlanta, blacks had three recreational sites compared to 22 for whites (Kruse 2005, p75). In 1954, The Atlanta Urban League calculated that whites had access to one acre of park land for every 155 residents compared to one acre of park land per every 1020 black residents. As a result, black parks witnessed severe overcrowding and much more rapid degradation (Kruse 2005). Myrdal (1944) writes, "virtually the whole range of…publicly administered facilities…are much poorer for Negroes than for whites" (p335). A graphic from President Truman's Report of the President's Committee on Civil Rights (Wilson 1947) makes the point visibly:



Although Jim Crow legislation was efficient at producing racial inequality, it was not perfect. As the Truman Report explained, "Following the *Plessy* decision, the Supreme Court for many years enforced with a degree of leniency the rule that segregated facilities must be equal. Gradually, however, the Court became stricter about requiring a show of equality"

(Wilson 1947, p82). Separate-but-equal facilities increased costs dramatically (Myrdal 1944). Additionally, some public goods could not be segregated directly. Troesken (2004) argues that, "because most cities and towns installed their water and sewer systems before 1920, during an era of relatively low residential segregation, it was difficult to construct systems that underserved African Americans without also underserving whites" (p91). As a result, he finds that the delivery of clean water and sewage disposal had a dramatic effect on lowering black mortality in the South. Furthermore, in some places, white public opinion had already begun to develop in opposition to overt racial prejudice and blacks were able to make headway in pursuing integration. Boston desegregated its schools in 1855 after sustained protest by blacks and abolitionist whites (Mabee 1968). By 1947, eighteen states had enacted antidiscrimination legislation prohibiting direct segregation (Konvitz 1947). Even some Southern cities (e.g. Atlanta) witnessed a significant local voice in opposition to Jim Crow (Kruse 2005). As direct segregation became untenable and the black population of these cities expanded, residential segregation became the obvious solution. Furthermore, unlike Jim Crow legislation, residential segregation permitted the separation of poor residents from wealthy residents in addition to the separation of residents of color.

Inequalities Generated Through Residential Segregation

When the nonwhite or poor community was segregated residentially, systematic denial of services was possible. A mid-century analysis of "American Negro, Puerto Rican, and Mexican" housing in large cities found that,

> "Garbage collections, building inspections, street maintenance, and other city services are less satisfactory than in other areas. The abnormal number of rat bites in Harlem, for example, may be ascribed not only to proper upkeep but to the ready supply of uncollected garbage in the streets. Southern cities and some in the North omit street paving and sidewalks in Negro sections. In hills sections the residents try to fill gullies in

> the streets with broken masonry, worn-out linoleum, and other trash" (Abrams 1955, p74-75).

In Birmingham, a committee of Black professionals protested the city's 1923 segregation ordinance saying that while blacks "would prefer to live to themselves," black neighborhoods, "are without the necessary sanitary arrangements, street improvements, lights, police protections, and the necessary comforts given other people in the municipality" (Connerly 2005, p44).

Among the most ambitious and expensive public goods that cities developed in the first decades of the 20th century were the delivery of clean water and removal of waste through sewer systems. Sewer and water mains were built along major roads, and homes located along these lines would have had the opportunity to be connected to the system. Troesken (2004) suggests, in a detailed analysis of Savannah and Memphis, that it appears that segregation, "facilitated efforts to underprovide African Americans with sewer and water systems" (p91). I build on Troesken's case studies by analyzing sewer and water extensions over time in four cities: Baltimore, Boston, Chicago, and Philadelphia. These cities all witnessed increases in racial and renter segregation between 1900 and 1940 and had data available on sewer construction.

To measure segregation, I calculated the *H* Index (as described in Chapter 1) for Baltimore, Boston, Chicago, and Philadelphia using ward-level demographic data from the 1900, 1910, 1920, 1930, and 1940 Censuses of Population and Housing.[78] For racial segregation, I use whites and nonwhites as the groups in the calculation of the measure. For class segregation, I use renters and homeowners. Table 3.1 shows each city's *H* index in 1900 and 1940 measuring white/nonwhite segregation and renter/homeowner segregation.

[78] In order to make these scores comparable to modern data, I adjust the scores using a correction factor to make the ward-level estimates similar to the tract-level estimates used in later decades.

Table 3.1: Segregation Increased in the early 20th C					
	Race			Class	
	1900	1940		1900	1940
Baltimore	0.43	0.60		0.07	0.12
Boston	0.33	0.52		0.09	0.11
Chicago	0.46	0.84		0.09	0.15
Philadelphia	0.29	0.44		0.04	0.09

If the argument that I have presented is correct, it should be the case that nonwhite and renter households should have been less likely to have access to water and sewer connections in more segregated cities. Unfortunately, I do not have the individual-level data to test this hypothesis. However, there are also aggregate implications of my theory. If elected officials were taking demographics into account when making decisions about where to build sewer extensions, we should we witness an interactive effect between segregation and the demographics of a neighborhood. As segregation increases, it should be the case that the share of residents who are nonwhite or renters should have a more powerful negative effect on new sewer extensions.

The data I use for this analysis were provided by the Center for Population Economics at the University of Chicago in the Historical Urban Ecological dataset (which is really a collection of many different datasets and maps). The dataset (Costa and Fogel 2015) includes ward boundaries for the four cities listed above between 1900 and 1930 and also includes a map of each city's sewer system. The sewer map includes the year different segments of the system were built. Using ArcGIS, I created counts of sewer segments in each decade for each ward and combined these counts with ward-level data from the Census of Population and Housing.

Observations are arranged by ward-census year. That is, each observation represents one ward in a city in a single year. The dependent variable in the analysis is the *Total New Segments*

built in each ward before the next census. The key independent variables are the share of each ward's total population that is *Black* and the share of occupied housing units that were *Rented* (as opposed to owned). These demographic variables are interacted with each city's *H index of segregation* (for race and class respectively) in a given Census year.

I control for the *Total New Segments* built in the city in each decade to account for the slackening pace of sewer development over time. I include the *Total Segments* built in the ward at the completion of the sewer system to account for the variation in sewer needs across wards. I also control for the proportion of those total segments that were built at the beginning of each decade in the variable *Percent Built*. Finally, I account for the share of the ward population that is *Foreign Born* to account for the possibility that city governments were providing fewer benefits to immigrant neighborhoods (which would have correlated with renter neighborhoods).

An important alternative (and undoubtedly true) explanation to rule out is that black and renting residents chose housing that lacked public services because it was less expensive. I do this by taking advantage of time. I explore the pattern of sewer line extensions in each decade between 1900 and 1940 given the racial makeup of each ward at the beginning of the decade. For instance, the total number of extensions built between 1900 and 1910 is regressed on the share of the ward that was black and the share that were renters in 1900. Because the dependent variable is a count of sewer segments, I fit a Poisson regression.

I was able to obtain data at the ward-level detailing racial makeup for every decade between 1900 and 1940, but data on renters is only available for 1900 and 1940. Because ward boundaries changed dramatically in some cities between these years, interpolation is not possible. Additionally, the Census did not tabulate data on renters in 1940 for the city of Chicago. As a result, adding the proportion of renters to the models significantly decreases the

number of observations. For this reason, I present the model without the inclusion of renters in the first model, and with the proportion of renters in the second.

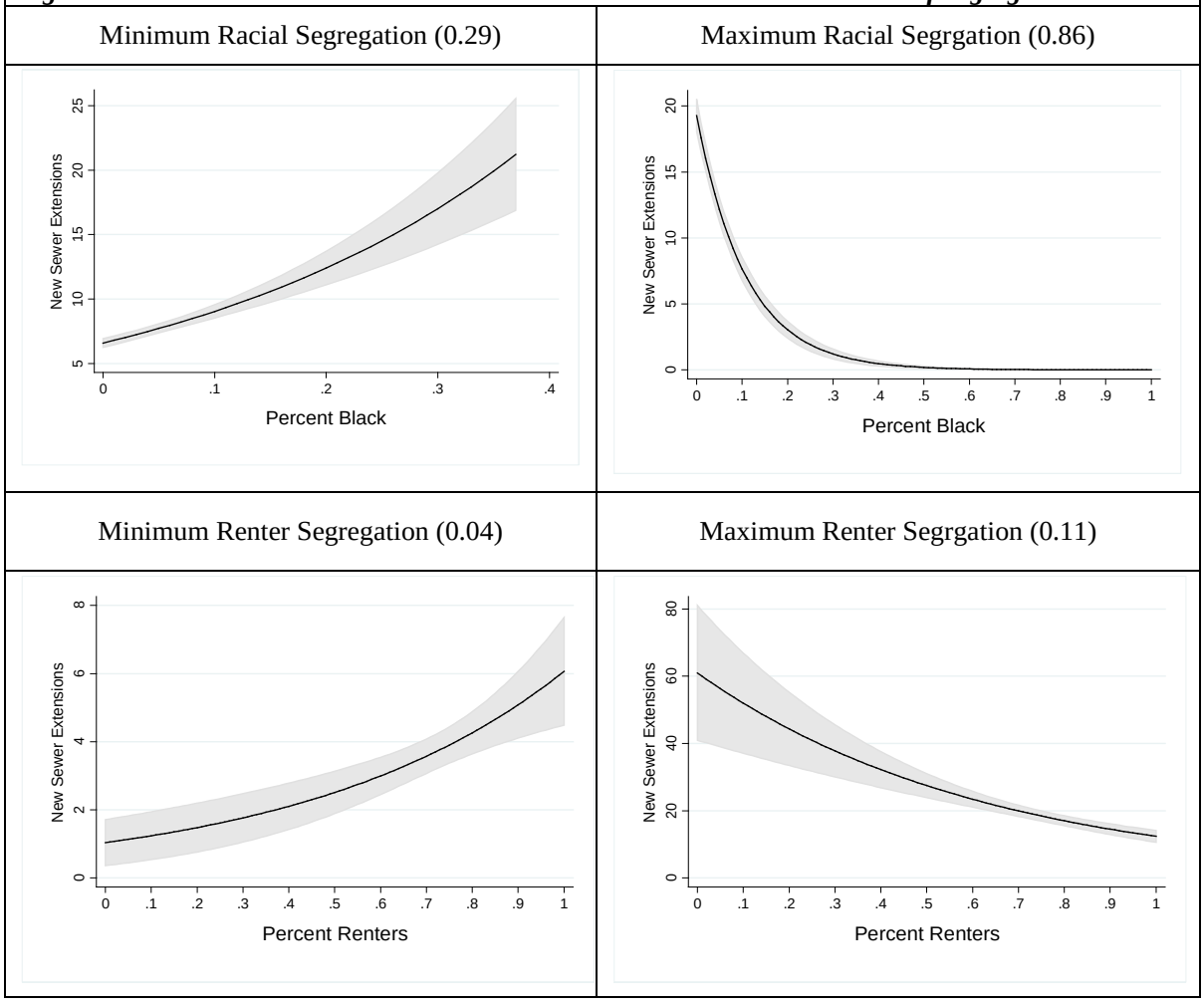
The results, presented in Table 3.2, reveal a powerful negative relationship between the share of the ward that was black or renting and new sewer extensions in more segregated cities.

Table 3.2: Segregation Decreased Access to Sewers for Blacks & Renters

	β	Std. Error	P>|t|	β	Std. Error	P>|t|
% Black*Racial Segregation	-21.643	1.347	0.000	-11.811	2.002	0.000
% Black	9.429	0.676	0.000	6.713	0.925	0.000
Racial Segregation	1.874	0.082	0.000	-4.645	0.424	0.000
% Renters*Renter Segregation				-48.256	8.570	0.000
% Renters				3.654	0.765	0.000
Renter Segregation				58.505	6.510	0.000
Total New Segments	0.000	0.000	0.000	0.001	0.000	0.000
Total Segments	0.000	0.000	0.000	0.000	0.000	0.000
% Built	-3.275	0.044	0.000	-2.740	0.062	0.000
% Foreign Born	0.074	0.097	0.442	-0.411	0.198	0.038
Constant	2.611	0.048	0.000	0.651	0.521	0.211
N	541			271		
Pseudo R^2	0.788			0.748		

The data indicate that in more segregated cities, heavily black and renter wards were unlikely to receive new sewer lines. Figure 3.2 plots the predicted number of new sewer segments across the full range of black and renter population shares for the least and most segregated city-years in the dataset. The graph in the top right makes clear that majority black wards see no additional investment in their sewer systems. A similar pattern exists for wards with increasingly large renter populations in cities that were segregated by class.

Figure 3.2: Predicted Sewer Extensions at the Minimum and Maximum Level of Segregation



In integrated cities however, the reverse is true: larger black and renting populations increase sewer line extensions. This may seem puzzling at first glance – but it is not. Troesken (2004) explains that the reason for this apparent generosity was self-preservation. He says:

> …discrimination in this arena was costly to white politicians and voters in at least three ways. First, given the networked structure of these systems it was difficult to deny service to African-American households and neighborhoods without also denying service to white households and neighborhoods…. Second, in a world where blacks and whites lived in close proximity, 'sewers for everyone' was an aesthetically sound strategy. Third, failing to install water and sewer mains in black neighborhoods increased the risk of diseases spreading from black neighborhoods to white ones (p9-10).

As a result, to the extent that sewer systems were built prior to rising segregation, variation in sewer system service did not disproportionately affect any demographic group. In Richmond, Virginia, neighborhood segregation actually declined between 1890 and 1930, and one contemporary observer wrote, "With the completion of the 1925 program practically the whole of Richmond was sewered and supplied with city water" (Knight 1927, p51).

In other cities, organized political action on the part of nonwhites and the poor mitigated inequalities. Bond passage in Atlanta required approval of two-thirds of votes cast and the two-thirds majority had to constitute a majority of registered voters – so by simply registering and not turning out, African Americans could ensure defeat at the polls (West 1976, Bayor 1996). In 1919, Black voters defeated a one-million-dollar bond package that was to provide, "for improvement of waterworks, a motorized fire department, erection of a museum at cyclorama, and the construction of a crematory with electricity generating facilities," after being told that, "blacks would receive no benefits from the measures" (West 1976, p13). When a new package was submitted to voters in 1921, it included $2,850,000 for water works and $750,000 for the viaduct (Atlanta Independent, February 24, 1921, p4). The mayor promised to appoint a special commission of colored citizens to advise the Bond Commission regarding the distribution of the

funds (Atlanta Independent, February 24, 1921, p4). On election day, Atlanta's "colored citizens…voted for every improvement named on the ballot" (Atlanta Independent, March 10, 1921, p4).

In some cities, sewers were built at the behest of property owners and developers. This was the situation in Birmingham and Los Angeles. In cities with this type of process, land-owners played a crucial role in the eventual sewer map. Because very few land owners were people of color, blacks in Birmingham and Mexicans and Chinese residents in Los Angeles lacked the opportunity to request sewer extensions or connections. While it might seem reasonable to explain inequality in access as the result of these economic differences, cities had other means by which to compel development. In Birmingham, sanitation and building codes were ignored in black neighborhoods (Connerly 2005), and in Los Angeles the city council ordered sewers to be built at the, "cost and expense of the several parties owning property along its route." However, they declined to compel sewer building in Sonoratown or Chinatown (Torres-Rouff 2013, p224; quoting Los Angeles City Council minutes, April 4, 1873). Because most Mexican and Chinese residents were renters, this refusal was a significant benefit extended to their landlords. As a result, in both cities, the absence of sewer and water service was concentrated in minority neighborhoods.

In this next section, I ask whether this unequal pattern of sewer development continued to affect minority and renting residents in the latter half of the 20th century. In order to investigate this question, I draw on the GeoLytics Neighborhood Change Database which matches and normalizes Census tract boundaries between 1970 and 1990. This normalization allows for direct comparison of tract attributes across time. I use this database to construct the race and

renter *H* index (as described in the previous section) for 4,566 incorporated municipalities and 800 unincorporated county areas.

The dependent variable in my analysis is the share of housing units in a given census tract that is connected to *Public Sewers*. My primary independent variables, similar to the previous analysis, are the share of the tract population that is *Nonwhite*, and the share of households that are *Renters*. These variables are interacted with each city's *H* index *of segregation* (for race and renters respectively) in each year. I control for the proportion of *Wealthy Families* in the tract (those earning incomes above the 90th percentile for a given Census year: $15,000 in 1970, $35,000 in 1980, $75,000 in 1990), the total *City Population*, and the total number of families connected to *Public Sewers* in the city. I include fixed effects for region and cluster the errors by city. The results are presented in Table 3.3 (summary statistics are in table A3.2).

Table 3.3: Nonwhite and Renter Sewer Access in Segregated Cities

	β	Std. Error	P>|t|
% Nonwhite*Racial Segregation	-0.261	0.069	0.000
% Nonwhite	0.164	0.037	0.000
Racial Segregation	0.122	0.035	0.000
% Renters*Renter Segregation	-2.643	0.854	0.002
% Renters	0.851	0.228	0.000
Renter Segregation	1.631	0.418	0.000
% Wealthy	0.254	0.105	0.016
City Population	0.000	0.000	0.000
City Public Sewer Connections	0.000	0.000	0.000
Midwest	0.053	0.013	0.000
South	-0.040	0.012	0.001
West	0.017	0.012	0.171
Constant	0.327	0.161	0.042
N	146,102		
R^2	0.327		

As was the case in the early period, between 1970 and 1990 renters and nonwhite residents continued to have inferior sewer access in more segregated cities. Of course today, overall sewer

access is high; the median census tract has 97% of homes connected to public sewers. The point demonstrated by this analysis is that both in the past and today, lack of access to public sewers is disproportionately concentrated among minority and renting residents.

Delivery of other public goods followed a similar pattern to sewer development and clean water provision. In 1900, 8,000 automobiles were registered in the United States; by 1940 the figure was 27.5 million (Federal Highway Administration 1997). But during this same period, actual spending on roads increased very little and dropped as a share of total budgets.[79] This meant that road paving distribution was an intensely political decision and different areas of the city were treated differently. One study of four Virginia cities reported, "a general lack of paving in the Negro residential areas" (Knight 1927, p53). In Los Angeles, Torres-Rouff (2013) explains, "many paved streets ran through the Anglo residential neighborhoods and commercial center but abruptly yielded to dirt as soon as they crossed into Sonoratown and Chinatown" (p226). A 1958 study of Birmingham analyzed white and black blocks in a single working class neighborhood and found that about a third of the black blocks had unpaved streets on three or four sides compared to only 6% of white blocks (Connerly 2005, p31).

As described in the introduction, mortality rates in cities during this time period, particularly the early years, were high. A budding public health movement sought to utilize government funds to address disease contraction and death. Cities created new public health departments, passed regulations regarding the storage and transport of milk, sent inspectors to stores and dairies, and engaged in large scale fumigation efforts. In all of these activities, white and homeowner neighborhoods were treated more protectively than neighborhoods inhabited by

[79] In a sample of 84 cities for which I was able to obtain data between 1902 and 1937, mean per capita road spending was $44 in 1902 (in 1912 dollars) and $43 in 1937. It reached a high of $51 in 1932. Road spending represented about 13% of city budgets in 1902 and about 8% in 1937.

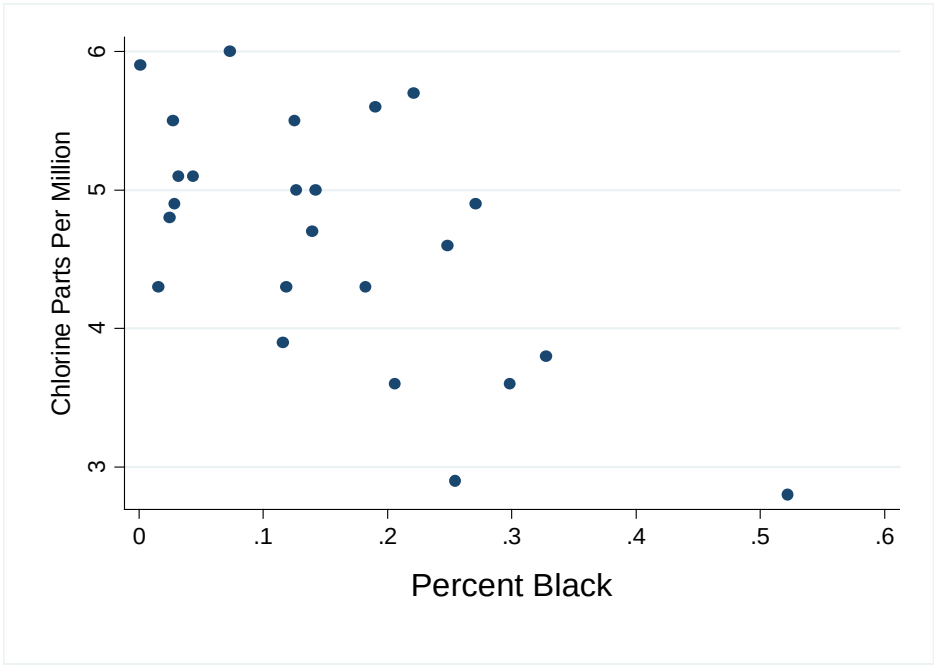
renters and minorities. In 1915, the nationwide infant mortality rate was 57% higher among nonwhites than whites. One study of 4 southern cities determined that nearly 1 of every 2 black babies died (Meckel 1990 p.142). Even still, black infants were "almost entirely" excluded from the "early part of the infant welfare campaign," (Meckel 1990, p142).

A 1914 analysis of Baltimore's Public Health department by the United States Surgeon General found that regulations were not enforced in the poorer parts of town. The report explained:

> An inspection was made by me of the stores selling milk in two of the districts of the city. One was located on the outskirts of the city in a good neighborhood…In every store the milk was sold in unbroken packages, was kept in a separate compartment of a large refrigerator and the conditions were as good as could be expected…The other district visited was of a different type altogether. It was located in the slums, among the foreign population. Here all the milk was sold in bulk under the most insanitary conditions. To make regulations here is practically hopeless. There are but three things to be done – stop the sale of milk in such places, establish a municipally controlled dairy within the district, or prohibit the sale of anything but bottled milk in original packages… (Fox 1914, p37).

In 1901, the Baltimore Health Department (reported in HUE dataset by Costa and Fogel 2015) reported an assessment of water quality in each ward. Only one ward had water that was classified as "Very Muddy" (as opposed to clear, fairly clear, cloudy, or muddy). That one ward was 52% black. The same ward also had the lowest level of chlorination in the entire city. In fact, there was a powerful negative relationship between chlorine parts per million and the share of black residents in a ward. Figure 3.3 provides a scatter plot of the data.

Figure 3.3: Chlorination of Water in Baltimore Wards, 1901



Not only were services provided differentially, but many cities engaged in a practice Rabin (1990) calls expulsive zoning: the placing of negative uses in minority neighborhoods. Kruse (2005) explains that as neighborhoods transitioned from white to black, city officials would assume that property values would fall and the area would become a slum. "Accordingly, planners and zoning committees lowered their standards for the region and began approving projects they would have routinely rejected if the residents were still white" (Kruse 2005, p74). A 1932 analysis of housing in one New Orleans neighborhood reported that, "The superintendent of the public school system used to live in this area but the white residents began to move out and then the city built a garbage incinerator over here, and all of the best whites moved out and the Negroes moved in with the poor whites," (Johnson 1932, p19). In Birmingham, city planners zoned black neighborhoods in flood plains and in industrial areas (Connerly 2005). Myrdal

(1944) reports that it was common to ignore criminal activity in black areas. As Muhammad (2010) explains, municipal authorities allowed crime to flourish in black neighborhoods as a service to white politicians and constituents. Doing so allowed whites access to prostitution, gambling, illicit alcohol and drugs while protecting white neighborhoods from the criminality. Because such operations were, "mostly owned, partially operated, and unofficially regulated by a largely white power structure" (Muhammad 2010 p.227), the benefits were captured by whites, while the negative externalities of vice were borne nearly exclusively by blacks. These strategies created conditions that lead later generations of planners to denote black areas as blighted slums, thus enabling the expulsion of blacks from these neighborhoods in redevelopment projects.

The historical record indicates that lower levels of segregation and more political power in the hands of blacks and the poor could mitigate such inequalities. Throughout the late 1880s, blacks held significant bargaining power in Atlanta city politics. Blacks were appointed to the nominating committees for city elected offices, and black votes were courted with promises of a black fire company, schools for black children, and street paving (Bacote 1955). After the white primary was struck down in 1946, blacks gained even more leverage in Atlanta politics. Black leaders had been pressing the city government for years to hire black police officers, "hoping to solve the problems caused by both the absence and the presence of white policemen" (Kruse 2005, p33), but their requests were ignored until they could marshal votes in city elections. In 1948, eight black patrolmen were hired (although they were only allowed to patrol black neighborhoods and could not arrest whites).

In Birmingham, many black neighborhoods formed active, dues-paying, civic leagues to lobby the city government for improved services. While they won a few small victories (the first city-owned park for blacks, some street paving and lighting, fire hydrant installation, sewer

extensions, and gas lines), they were mostly met with staunch resistance from the all-white government. One organization, the Harriman Park Civic League waited for four months to get an appointment with the public safety commissioner, Bull Connor. When the meeting finally occurred, Connor literally turned his back on the presentation (Connerly 2005, p221). In the late 1960s and early 1970s, as political power began to shift toward black residents, many of the requests brought by the civic leagues were finally addressed.

In Boston, Progressive Reformers attracted public support and won a series of institutional reforms between 1903 and 1913. Nonpartisan neighborhood organizations arose as powerful voices in municipal politics. The result was the consolidation of political power in the hands of middle-class homeowners (Connolly 2009) at the expense of working-class white ethnic immigrant constituencies like the Irish. However, the city was fairly integrated residentially along both ethnic and class lines during these years – and so, while political power shifted hands and the agenda changed, when neighborhoods won improvements like street cleaning and repair, playgrounds, libraries, or improved police protection, they benefitted all residents in the community, not just those with political power.[80]

Between 1914 and 1950, Boston was governed (on and off) by a staunch advocate of the poor and working classes – James Michael Curley. Curley was a machine-style politician, who was never able to consolidate a dominant citywide organization (Erie 1988). Many histories of this period note Curley's lavish attention to the city's, "working-class, ethnic neighborhoods" (Connolly 2009, p146). But the Census data from the period reveal that even the most heavily ethnic wards were actually fairly mixed. In 1930 for instance, wards ranged from 21% foreign

[80] Connolly (2009) argues that this shift in political power altered the agenda of city politics toward neighborhood improvement and away from issues that the working class prioritized like union protections and wage and pension increases (see pages 115-120) and also decreased participation among working-class voters.

born to 42%, and no ward housed more than 11% of the total foreign born population. So when Curley "ordered loans to clean and pave local streets, build a playground and bathhouse, and improve sewer and water serves" (Connolly 2009, p166) in the North End in order to woo Italian votes, non-Italian residents also benefitted.[81]

Yet, in many cities, even when residents and activists mobilized to lessen inequalities, "segregation [became] the cornerstone of the elaborate structure of discrimination against some American citizens," (Wilson 1947). Hayward (2013) explains that the, "black ghetto [was] subjected to systematic disinvestment, while collective investments in new residential and commercial structures, and in 'public amenities', such as parks and athletic facilities and well-built and well-equipped schools, disproportionately [were] channeled to places that were, first legally, then practically, restricted to those constructed as white" (p63). These inequalities contributed to a growing collective sense of whiteness and homeowner identity on the one hand (Sugrue 1996, Hayward 2013), and on the other hand, the hardening of stereotypes about the suitability of poor and nonwhite residents as neighbors. White homeowners believed that individuals who shared demographic characteristics with those who lived in disinvested neighborhoods would bring slum conditions with them wherever they lived. In 1951 and 1953, Rose Helper conducted 40 interviews with real estate agents in New York City and Chicago to learn about the, "reasons for excluding Negroes from white residential areas" (Helper 1969 p18). She reported that the agents believed that, "[white people] fear that their neighborhood will deteriorate if Negroes come because of their manner of living in other areas: they associate Negroes with the undesirable slum (dirt, noise, squalor, stealing, vice), something to be avoided

[81] One scholar (Puleo 1994) estimates that in 1920, 95% of the North End population was Italian (p116). Without detailed data regarding the exact location of Curley's benefits, it is impossible to know the degree to which they served other populations.

if possible" (p79). In response, white homeowners sought continued governmental protection of their neighborhoods. Over the next several decades they succeeded in this fight.

Conclusion

Between 1900 and 1940, America's cities became increasingly segregated along race and class lines. While renters and homeowners both became more concentrated, the most dramatic changes in segregation occurred between blacks and whites. These changes in residential living patterns changed the distribution of public goods. As cities became modern service providers, the allocation of public goods was intensely political. In the earliest years when no neighborhoods benefitted from paved streets or clean water, health and cleanliness did not differ dramatically from place to place. But as streets became sewered, paved, and lit, and as inspectors enforced building, sanitation, and health codes, some neighborhoods reaped the benefits while others, "continued to contend with dirt roads and open cesspools" (Torres-Rouff 2013, p227). As Torres-Rouff (2013) explains, "these decisions produced a city that physically imposed inequality on its citizens" (p227). Such choices would be consequential for the future as inhabitants of these neighborhoods came to be associated with poor living conditions. Today, evidence indicates that segregation is maintained by white homeowners' willingness and ability to pay a premium to live among white, educated neighbors (Cutler, Glaeser, and Vigdor 1999).

Chapter 4: City policy maintains/deepens segregation, 1940-1970

By 1940, segregation patterns in cities were well-established. The boundaries of minority neighborhoods were clearly defined and white prejudice against nonwhite neighbors was entrenched. As one Chicago realtor explained, our "firm has a policy where they won't sell to a Negro in an area where Negroes are not resident…the general public…is not willing to accept the Negro as a neighbor. That's the basis for our not selling to Negroes in this type of an area unless one Negro family is already in the block. You can't be censured then. A silly idea but that's life" (Helper 1969, p41).

The maintenance of property values was the typical explanation offered for these practices; a belief that had been cultivated by policies enacted by local governments and which quickly became a self-fulfilling prophecy. Blacks were seen as undesirable *neighbors* because the features of their *neighborhoods* became associated with individual members of the racial group. Whites came to similar conclusions about Chinese residents in San Francisco (Shah 2001, McWilliams 1964) and Latinos throughout the Southwest (Abrams 1955, Torres-Rouff 2013, McWilliams 1964). This was the case despite the fact that minorities and renters experienced poor neighborhood quality because of paltry municipal services, neglectful landlords, and the overcrowding that resulted from segregation, not from their own doing.

During the build-up of the war effort in the early 1940s, massive demographic changes rippled through the nation. African Americans moved to the North and West, and the war and agricultural industries attracted Latinos to cities and farms in the Southwest (Weaver 1948, McWilliams 1964). In the post-war period, city governments utilized policy instruments like urban renewal and the placement of public housing to prevent minority and poor neighborhoods from expanding into white areas, and to protect property values for white homeowners. At the

same time, tumultuous battles over racial integration (of neighborhoods, schools, busses, lunch counters, unions, etc.), the rising Civil Rights movement, and the passage of the Voting Rights Act, threatened to undermine white homeowners' control of the political system, distribution of city services, and ability to police the borders of their neighborhoods (Sugrue 1996, Kruse 2005, Self 2003).

A great deal of insightful, detailed historical research studying the Civil Rights movement, segregation, and suburbanization has been written about the postwar period and this chapter does not attempt to retell what we already know. Instead, here and also in Chapter 5, I focus on the role of city policy in the generation of neighborhood segregation and suburbanization. An important contribution of these chapters is to explore why, if the drivers of segregation and suburbanization are similar, do white homeowners choose one avenue of separation over another? I argue that policy control plays an essential role. When white homeowners lost the power to adequately guard their neighborhoods and dictate municipal policy and public goods distribution, suburbanization became attractive. First, I show that urban renewal was linked to increased race and class segregation in the postwar period. Then, I demonstrate that whites in racially segregated cities witnessed increasing threats to their political power, both electorally and more specifically, with regard to housing policy.

Urban Renewal and Segregation

In 1932, more than 80% of local revenues came from property taxes (Census of Governments Finance File). By the end of that year, nearly 750 homes were foreclosed every day (Gotham 2000). City government revenue plummeted. Mayors sought relief from Congress; organizing as the National Conference of Mayors and testifying in hearing after hearing about the dire need for federal subsidy (Ogorzalek, forthcoming). As part of its

response, Congress enacted housing legislation. With its first foray into this area, the 1934 Housing Act and establishment of the Federal Housing Administration (FHA), Congress had multiple goals –the reemployment of the construction industry, the shoring up of the financial sector, and the stimulation of home ownership. But these policies were *also* spurred by a commitment to residential segregation. As Gotham (2000) details, the major authors of the proposals under consideration were, "leading officials in the real estate and lending industries" (p303), most of whom, by this time, had come to view race and class segregation as a stabilizer of property values and therefore, made them a conscious goal of these policies. Thus, it should not be surprising that the FHA played a major role in the institutionalization of suburban segregation (Gelfand 1975, Jackson 1985, Massey and Denton 1993).

However, the next piece of housing legislation, enacted in 1937 as the Wagner-Steagall Housing Act, was a conscious turn *away* from these forces. The Wagner Act sought to, "provide financial assistance to the States and political subdivisions thereof for the elimination of unsafe and insanitary housing conditions, for the eradication of slums, for the provision of decent, safe, and sanitary dwellings for families of low income, and for the reduction of unemployment and the stimulation of business activity" (Wagner-Steagall Act 1937). To achieve these goals, the act established the United States Housing Authority (USHA) to, "make grants and loans to local public housing authorities, to enable them to build, own, and operate housing projects for families of low income," and importantly, to clear slums (Robbins 1937, p4). As such, the Wagner Act served as the first Congressional effort to assist in what is now commonly referred to as "urban renewal" – local efforts to address the ravages of time, revitalizing the "urban built environment" (Avila and Rose 2009, p339).

Whereas the establishment of the FHA and passage of the 1934 Housing Act were aimed at assisting those who *could* afford housing in the private market, the Wagner-Stegall Act sought to, "provide decent, safe and sanitary housing for that large group of our population who [could not] afford to pay enough to cause private capital to supply their housing needs" (Brabner-Smith 1937, p681). In addition to focusing on low-income residents, the Wagner Act also understood that, "any realistic approach to clearing slums and rehousing low income families would necessarily include a large number of Negroes as tenants" (Weaver 1940, p150). Thus, the USHA included an Office of Race Relations directed by an African American, Harvard-trained economist, Dr. Robert C. Weaver (Meyer 2000).[82] Weaver's office was charged with reviewing applications for federal funds to ensure that, "sound racial policy may be reflected in all projects" (Weaver 1940, p155). In a 1968 interview, Weaver recalled:

> The Public Housing Program was perhaps one of the outstanding examples of equity of treatment as between white and black Americans….In public housing we not only got approximately a third, as I recall, at one time of the units available to nonwhites--most of them were Negroes--we also got Negro managers, which was unheard of in places like Atlanta and Memphis and Jacksonville and in Miami. We were able in the North to get projects which were open to both Negroes and whites. This required some doing as early as 1937 to '38. These were the exceptions rather than the rules but they did occur. (Weaver Oral History 1968, p9)[83]

Reviewing Dr. Weaver's tenure, *The Crisis* (the official publication of the NAACP) reported, "As a result of his efforts and the support of USHA officials, a more fair and equitable racial policy now exists in USHA than in any other branch of the Federal Government. On the basis of need, Negroes are enjoying equitable benefits from public housing…" (October 1940, p319).

[82] Dr. Weaver was the first African American to earn an Economics PhD at Harvard. He went on to serve as the first black cabinet member as the Secretary of Housing and Urban Development.
[83] Available at http://transition.lbjlibrary.org/files/original/6404ca478ed6c3848eedaaf380acdb45.pdf

However, despite the fact that, "The United States Housing Authority…tried to set…desirable precedents in the field of practical racial relations" (Weaver 1940, p155), the seeds of segregation were embedded in the design of urban renewal; planted by the coalition that brought it to fruition.

The first of these seeds was local control. J. W. Brabner-Smith, Counsel for the Federal Housing Administration explained in 1937 that the, "problem is essentially local and should be decentralized as far as possible" (p.681). Allowing local governments to decide which land would be cleared and where new housing would be built virtually guaranteed the continuation and exacerbation of race and class segregation because white homeowners and land-oriented businesses controlled city governments and opposed residential integration along either race or class lines. Further, these interests quickly moved to ensure control of the new housing and renewal authorities created to direct and manage the process (Hirsch 1983, Sugrue 1996, Gotham 2001). Sugrue (1996) explains, "local governments had the final say over the expenditure of federal funds, the location of projects, and the type constructed" (p60).

In Chapter 3, I provided evidence that city governments underprovided city services and practiced expulsive zoning – the placement of negative uses (like garbage incinerators) in poor and minority neighborhoods. The land values in these areas were low; the environment was degraded. As a result, they were considered blighted. In the early 1930s, local realtors and bankers assisted the federal Home Owners' Loan Corporation (HOLC) in mapping property values of every block of every city in the nation (Gotham 2000). The HOLC's low appraisal of neighborhoods of color and large numbers of renters is well known (Jackson 1985, Weaver 1948). These areas too, were considered slums. In San Antonio, 82,000 Mexican Americans populated a 4-square mile neighborhood west of downtown. Many of the homes were wooden

shacks or converted horse stalls. Tellingly, the neighborhood lacked paved and lit streets, parks, and sufficient sewer capacity (obviously the doing of the local government). Annual flooding created a breeding ground for mosquitos (Fairbanks 2000). Neighborhoods like this *barrio* – predominately populated with people of color and renters – particularly those close to downtowns or homogenous white neighborhoods, were the first to be cleared (Hirsch 1983, Sugrue 1996).

At the same time, in order to preserve property values and access to FHA loans (which required racial homogeneity), white homeowners vigorously blocked the building of low-income and multi-unit housing in their neighborhoods (Weaver 1948, Sugrue 1996, Hirsch 1983). Weaver (1948) reports that even whites living miles away from proposed projects objected to their development on the grounds that their property values would be threatened. Nearly all new housing was provided on a segregated basis – that is, whites and nonwhites were not to live in the same projects (Weaver 1946). In order to provide enough units for racial minorities, and given the few sites that were available for building, many of the public housing projects were constructed as high-rise buildings – which, even at the time, were understood to be less desirable for the successful integration of people in need (Weaver 1946). Thus, as neighborhoods with large populations of renters and people of color were razed, these residents were displaced into even more densely segregated communities. In both the decisions regarding clearance and the decisions regarding the building of replacement housing, local control generated increased segregation.

The second important feature linking urban renewal to segregation was underfunding. Basil Stockbridge, Executive Assistant to the United States Building and Loan League, complained that, “it can readily be seen that the Authority’s activities will hardly scratch the

surface of the real needs of the country in eliminating urban slums and blighted areas" (Stockbridge 1938, p329). The Act required that the development of any new housing be accompanied by the razing of unsafe or insanitary dwellings, "substantially equal in number to the newly constructed dwellings provided by the project" (Wagner-Steagall Act, 1937, p5). But the new housing did not need to be located where the old housing had stood. Additionally, it was possible to raze more housing than was actually built. The lack of adequate funds meant first, that many slums remained, and second, that the number of new, affordable units was generally lower than the number cleared. Because of this, overcrowding in existing poor and minority neighborhoods worsened.

Furthermore, the receipt of federal funds required the local community to contribute funds for construction, typically in the form of land donation and property tax exemption, as well as funds for ongoing operation of the project (Levine 1941). Many cities eagerly accepted the federal dollars, but budgeted vastly insufficient amounts for the maintenance of public housing. So, even though by the 1950s most housing authorities stopped the explicit segregation of public housing tenants, and in some cases promoted peaceful race relations (Weaver 1946, 1956, Collins 2004), the degradation of the units meant that they had already become housing of last resort. Those who could avoid public housing did and preexisting segregation meant that it was whites who could most easily find housing in the private market.

As is true of all large government endeavors, the coalition in support of the Wagner Act and its later revisions was a collection of diverse, conflictual interests. These interests can be roughly categorized as those who emphasized slum clearance versus those who sought "public low-rent" housing (Ickes 1935, p109).[84] The former included business interests who held

[84] Although of course, there was diversity within these broad groups, see Marcuse 1995.

property in and/or relied on a healthy economic market in the downtown of cities, real estate elites, urban planners, homeowners, and local politicians hoping to increase the tax base (Zipp 2012, Ringelstein 2015, Avila and Rose 2009, Gotham 2001, Sugrue 1996). As one journalist representing this set of interests explained, "the housing problem is not merely one of replacing insanitary or unhealthful dwellings for large numbers of our people. More importantly, it involves the whole problem of progressive neighborhood decay, which for years has been eating like a cancer at the heart of every great city in America. The victims of this cancer are not only slum dwellers. In greater number these victims are taxpaying, home-owning families in neighborhoods from humble to well-to-do in all parts of the country" (Lewis 1937, p189).

On the other side were those concerned about the extreme housing shortages among lower-income residents, severe overcrowding plaguing minority neighborhoods, and the influence of slums on lax moral standards and community disorder (Dean 1949, Zipp 2012, Meyer 2000, Hirsch 1983). This group included many low-income and working class residents, people of color, organizations like the NAACP, institutions like the Chicago Defender, unions, and social workers (Meyer 2000, Gotham 2001, Compass 1936).

From the outset, slum clearance supporters, like the National Association of Real Estate Boards, were opposed to direct government provision of housing (Gotham 2001). However, much of the land that local elites viewed as blighted and sought to redevelop was residential, and the areas were often physically quite large. Razing the houses and assembling parcels required eminent domain, which required a clear public purpose. Public housing offered this justification, but only when *local* authorities engaged in the taking – thus necessitating local control.[85] Public

[85] In *United States v. Certain Lands in the City of Louisville* (1935) the 6th Circuit Court ruled that the condemnation of land for slum clearance by the *federal* government was unconstitutional because it did not constitute a use necessary to carry out the powers delegated to Congress. The Housing Act of 1937 thus moved to decentralize

housing advocates worried that local control over site selection and construction would exacerbate segregation (Meyer 2000), but without support from the slum clearance interests, public housing would have collapsed nearly as soon as it started for lack of funding (Marcuse 1995).

When the Wagner-Stegall Housing Act was revised and expanded in 1949 and 1954, power shifted toward the interests favoring slum clearance and segregation. Because the crisis of the Great Depression had abated, slum clearance was much more popular with voters and elites than was public housing (Fairbanks 2000, Zipp 2012).[86] As Gotham (2001) explains, these revisions, "represented the culmination of real estate industry lobbying efforts to curtail the production of public housing, create local redevelopment authorities with broad powers of eminent domain, and provide generous public subsidies for private redevelopment" (p297). By the time the last funds were allocated to local governments in 1974, the program had operated for more than 25 years as a mechanism to maintain and deepen segregation; it was termed the, "successor-weapon to the restrictive covenant and the racial zoning ordinance" (Abrams 1950). According to Collins and Shester (2013), urban renewal cumulatively resulted in the clearance of 400,000 housing units and 57,000 total acres; 300,000 families were displaced, about 54% of whom were nonwhite.[87] But, as we saw with racial zoning in Chapter 2, there was great variation in the local pursuit of urban renewal funds, and thus its effect on segregation.

To provide evidence of the relationship between urban renewal and segregation, I rely on a dataset gathered by Collins and Shester (2013). In their article, Collins and Shester (2013)

housing administration – requiring local housing authorities to be established to receive loans and grants from the federal government and engage in slum clearance and public housing construction (Freedenberg 1941).

[86] The Housing Acts were not the only mechanism cities used to engage in urban renewal, but patterns were similar with regard to other programs. For instance, Barrett and Rose (1999) provide evidence that local business, politicians, and real estate interests utilized highway construction to produce similar outcomes.

[87] Collins and Shester (2013) provide significant evidence that these measures accurately capture urban renewal activity undertaken by cities.

show that slum clearance and urban development programs had quantifiable *positive* benefits on city-level measures of income, property values, employment, and poverty rates. I seek to determine whether or not the program also increased race and class segregation. Collins and Shester's data represent all funds approved and disbursed under Title 1 of the 1949 Housing Act between 1950 and 1974. The data were gathered from the Department of Housing and Urban Development's Urban Renewal Directory. Cities applied for federal grants for particular urban renewal projects, and the directory listed the value of total approved and disbursed grants as of the date of publication. I add to these data each city's level of white/nonwhite and renter/owner segregation in 1980, measured using the *H* Index described in Chapter 1:

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents total population of neighborhood *n* or city *c* and E is the entropy (diversity) of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city (no segregation), and 1 where all neighborhoods contain only one group (high segregation).

First, I regress *Total Approved Urban Renewal Funds* (in hundreds of millions of dollars) as of 1974, on the *H* Index of *Segregation in 1950*. We should expect that cities with a strong preexisting propensity for segregation should have been the most eager applicants for federal funds. I add a series of city characteristics also measured in 1950 to account for the many demographic and environmental conditions that might have both led cities to seek urban renewal funding and be correlated with segregation. These controls include the proportion of housing units that were *Owner* occupied, *Median Home Value*, the share of housing units that were *Dilapidated*, the share that were *Built Prior to 1920*, and the share that lacked *Indoor Plumbing*. I include *Total Population*, the share of the population that was *Nonwhite*, median *Educational Attainment* of the population over age 24, the log of *Median Family Income*, the *Employment*

Rate, the share employed in *Manufacturing*, and the percentage of families with *Income Below $2,000* in 1949. These variables were all provided by Collins and Shester (2013). I add fixed effects for region, and report robust standard errors clustered by state. Collins and Shester provide data for all cities with more than 25,000 residents in 1950 and 1980 (482 in total), but I only have segregation measures for 172 observations. Tables 4.1 presents the results (summary statistics are in appendix Table A4.1).

Table 4.1: Relationship between Preexisting Racial Segregation and Approved Urban Renewal Funds

	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Segregation, 1950	2.49	0.551	0	1.205	0.321	0.001
% Owner occupied, 1950				0.004	0.005	0.456
Median Home Value, 1950 (log)				0.128	0.255	0.617
% Dilapidated, 1950				0.012	0.016	0.443
% Built Pre-1920, 1950				0.009	0.003	0.011
% Units w/o Plumbing, 1950				-0.005	0.005	0.342
Population (millions), 1950				0.706	0.098	0.000
% Nonwhite, 1950				0.005	0.006	0.422
% Employed Manufacturing, 1950				-0.002	0.004	0.539
% Employed, 1950				-0.019	0.023	0.419
Median Education, 1950				-0.028	0.062	0.655
Family Income, 1950 (log)				0.25	1.166	0.831
% Incomes Below $2000, 1950				-0.003	0.023	0.896
Constant	-0.237	0.162	0.152	-1.771	8.885	0.843
N	173			172		
R^2	0.227			0.679		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

Table 4.1 reveals that the application for urban renewal funds is strongly correlated with preexisting segregation. Those places that had a propensity for segregation were the most likely to apply for federal funding – even accounting for all of the physical factors that would have generated such applications. Topeka, Kansas, with a segregation index of 0.26 in 1950, applied for about $17.5 million in urban renewal funds over the course of the program. Kansas City, Kansas, where the segregation index was 0.54, applied for nearly $53 million. Atlanta, Georgia, with a segregation index of 0.67, applied for more than $100 million. In Richamond, VA, where

the segregation index was 0.51, city leaders only asked for $37 million. Salt Lake City, Utah with a segregation index of 0.18 applied for less than $5 million compared to Denver, Colorado's application of $83 million with a segregation index of 0.49.

Next, I analyze the effect of urban renewal funding on future levels of *Segregation* (*H* Index measured in 1980), conditional on preexisting segregation (*H* Index measured in 1950). The independent variable in these analyses is *Total Disbursed Urban Renewal Funding* (in hundreds of millions of dollars) as of 1974. I do not have data on renter segregation in 1950, so these analyses use the 1950 level of racial segregation as the control. Again, I present the models with and without demographic and environmental controls measured in 1950. Table 4.2 shows the results for racial segregation and 4.3 shows renter segregation.

Table 4.2: Relationship between Dispersed Urban Renewal Funds and Future Racial Segregation

	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Urban Renewal Funds ($100 millions)	0.073	0.021	0.001	0.073	0.029	0.014
Segregation, 1950	0.514	0.11	0.000	0.476	0.087	0.000
% Owner occupied, 1950				0.002	0.001	0.088
Median Home Value, 1950 (log)				0.118	0.043	0.010
% Dilapidated, 1950				-0.004	0.004	0.350
% Built Pre-1920, 1950				0.002	0.001	0.152
% Units w/o Plumbing, 1950				-0.001	0.001	0.165
Population (millions), 1950				-0.004	0.017	0.832
% Nonwhite, 1950				0.007	0.002	0.003
% Employed Manufacturing, 1950				0.003	0.001	0.003
% Employed, 1950				0.006	0.006	0.329
Median Education, 1950				0.007	0.014	0.642
Family Income, 1950 (log)				-0.292	0.187	0.127
% Incomes Below $2000, 1950				-0.001	0.004	0.726
Constant	0.017	0.032	0.609	0.469	1.578	0.768
N	172			171		
R^2	0.639			0.711		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

Table 4.3: Relationship between Dispersed Urban Renewal Funds and Future Renter Segregation						
	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Urban Renewal Funds ($100 millions)	0.023	0.006	0.001	0.020	0.009	0.037
Segregation, 1950	0.005	0.032	0.889	0.016	0.041	0.700
% Owner occupied, 1950				0.000	0.001	0.703
Median Home Value, 1950 (log)				0.059	0.030	0.060
% Dilapidated, 1950				0.000	0.001	0.676
% Built Pre-1920, 1950				0.000	0.000	0.464
% Units w/o Plumbing, 1950				0.001	0.000	0.052
Population (millions), 1950				0.003	0.011	0.761
% Nonwhite, 1950				0.000	0.001	0.997
% Employed Manufacturing, 1950				0.000	0.001	0.826
% Employed, 1950				-0.001	0.003	0.715
Median Education, 1950				0.016	0.007	0.032
Family Income, 1950 (log)				0.008	0.118	0.946
% Incomes Below $2000, 1950				0.001	0.003	0.800
Constant	0.129	0.013	0	-0.591	1.130	0.604
N	172			171		
R^2	0.229			0.334		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

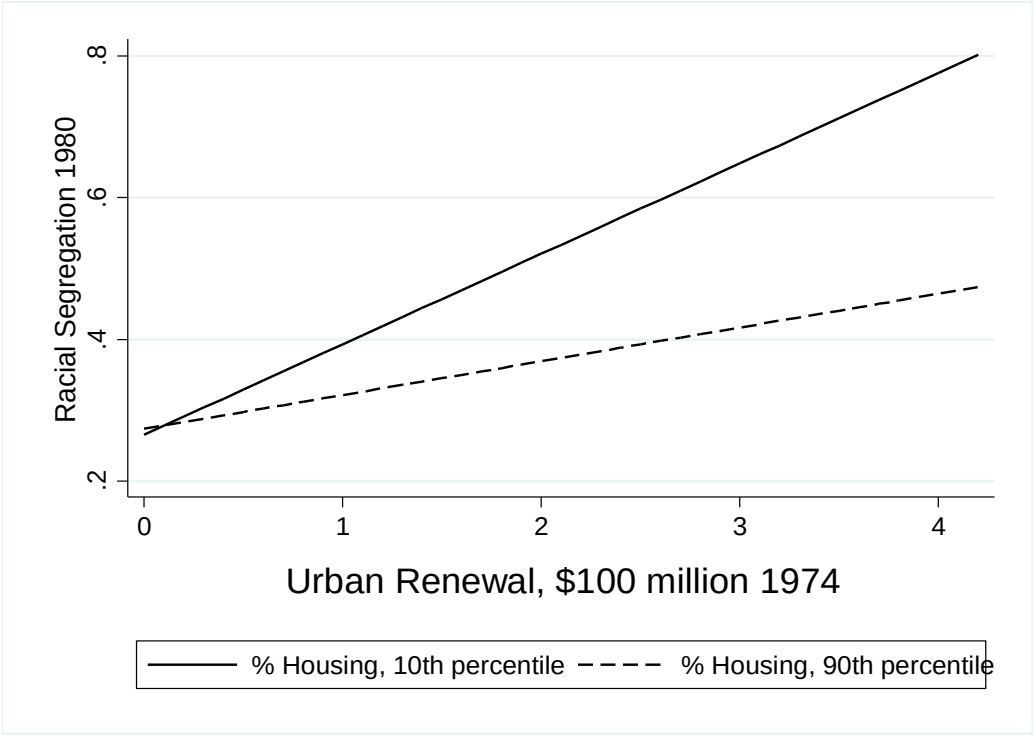
Tables 4.2 and 4.3 reveal that the vigorousness with which a city pursued urban renewal affected the level of segregation after the completion of the program (conditional on starting levels of segregation). The results are much more powerful for racial segregation than for renter segregation. Every additional $100 million in urban renewal funds is associated with a 7% increase in racial segregation, compared to a 2% increase in renter segregation.[88] As was the case for the effects of zoning shown in Chapter 2, local policy implementation is more tightly linked to racial housing patterns than class housing patterns.

This historical evidence indicates that cities varied not only with respect to their participation in the urban renewal program, but also in their investment in the ongoing maintenance of public housing. To investigate this possibility, I add to the data a measure of the

[88] Collins and Shester (2013) use an instrumental variable approach in their analysis. They estimate urban renewal funds with the number of years the city had access to the program as a result of state enabling legislation. Even more powerful results are evident when I replicate their strategy.

share of total expenditures each city spent on *Housing and Community Development Operations*[89] in 1972. I interact this variable with the measure of *Total Urban Renewal Funding* in Model 2 from Table 4.2 above.[90] I also add a control for the number of *Public Housing Units Per Capita* built under the Housing Act (from Collins and Shester) to account for differences in the need for maintenance spending.[91] Figure 4.1 reveals how urban renewal funding operated differently when cities invested in ongoing maintenance and when they did not.

Figure 4.1: Urban Renewal Interacted with Housing Operations



[89] This variable was constructed using the finance data described in Chapter 1. It is calculated as the total dollar amount spent on housing and community development minus housing and community development capital outlays, divided by total expenditure.

[90] Adding the interaction to Model 2, Table 4.3 (analyzing renter segregation) produces a similar effect that is smaller in size than the effect on racial segregation.

[91] Interestingly, the coefficient on this variable is negative – meaning that cities that had more public housing overall were less segregated. However, interacting the number of public housing units with urban renewal funding results in a positive coefficient. This indicates that slum clearance and public housing were both factors in the increase in segregation that urban renewal produced.

In cities that accepted urban renewal funds, but budgeted nothing for operations in 1972, urban renewal had a steep positive effect on racial segregation. In places that provided municipal funds for the maintenance of renewal sites, increasingly vigorous renewal expenditures had a much smaller effect on segregation. Of course, this analysis does not offer causal leverage. It is entirely plausible that the cities that were inclined to invest in maintenance had a social/political culture that led to a smaller increase in residential segregation for other reasons. Whatever the underlying cause was – cities that accepted federal funds without ongoing budget provision for housing operations segregated the most rapidly. This variation aside, generally speaking, where slums were cleared and public housing was built, segregation increased.

Yet, even while urban renewal was largely carried out to the benefit of white homeowners and land-oriented businesses, their control over public policy was not absolute; the rising Civil Rights movement threatened it significantly. As of 1960, not a single large city in the United States had elected a black mayor. By 2010, more than a third had (Vogl 2014). Changes to voter eligibility brought by the 24th amendment and the 1965 Voting Rights Act increased turnout of racial minorities and the poor during this period as well (Filer, Kenny, and Morton 1991).

I use data collected by Vogl (2014) to investigate the relationship between levels of segregation and interracial electoral competition. Vogl (2014) analyzes mayoral election returns between 1965 and 2010 for all cities that had 1960 populations that were at least 50,000 and 4% black (194 cities). His data record the race of the top two candidates (either black or not black) and their vote totals. I add segregation measures to Vogl's data resulting in complete data for

122 cities.[92] During the 1960s, only 13 black candidates sought the mayor's seat in Vogl's dataset; this number rose to 57 in the 1970s, and 84 in the 1980s. Interracial electoral competition was much more likely in more segregated cities. To show this, I regress a dummy variable coded 1 if the election was *Interracial* (e.g. featured a black candidate running against a non-black candidate) on the city's *H* Index of *Segregation* for the election year (interpolated between Censuses). I add the share of the city's residents that were *White* and the share *Renting* their homes, as well as the natural log of total *Population*, and a trend variable for the *Year* as controls. I use a random-effects logit model with errors clustered by city. I restrict the analysis to elections that occurred between 1965 and 1990 in order to focus on the post-war period. The regression includes 731 elections from 117 cities. Figure 4.2 shows the marginal effect of segregation on the probability of witnessing an interracial election, holding all other variables at their mean values.

[92] I am missing pre-1970 segregation measures for 20 cities in Vogl's dataset. I use 1970 segregation for the 36 elections between 1965 and 1970 for these places. Results are robust to the exclusion of these observations.

Figure 4.2: Segregated Cities Saw More Interracial Elections in the Post-War Period

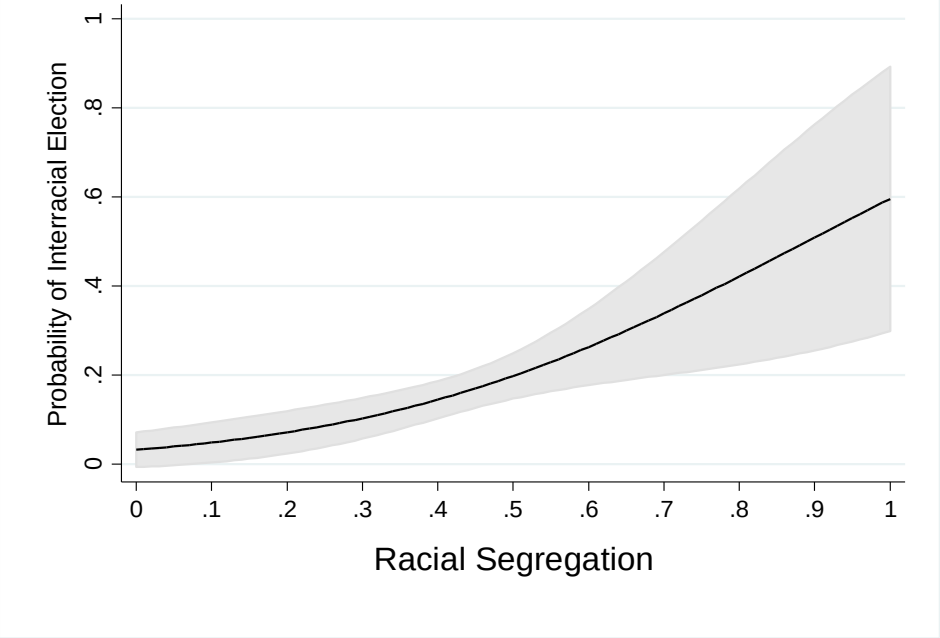


Figure 4.2 makes clear that racially segregated cities were much more likely to experience interracial elections – even controlling for the share of the population that was nonwhite. As will be shown in Chapters 6 and 7, segregated cities are also more likely to have racially divisive politics. Although the dividing lines were in place long before the 1960s, they became much more visible in electoral politics during the postwar period. Elections featuring black candidates (and white contenders) were contentious – driving up turnout among both blacks and whites, and decreasing margins of victory (Vogl 2014, Lublin and Tate 1995, Washington 2006). However, the vast majority of elections were still won by whites. Blacks only won 13% of the 731 contests reflected in Figure 4.2; moreover, these wins were concentrated in places with majority black populations. Although whites maintained power in

most cities throughout the 1960s and 70s, their hold was tenuous. This weakness became increasingly clear through the successes of the open housing movement.

In 1942, only 36% of whites said that they would not be bothered if a black person with their same income and education moved into their block (Schuman and Bobo 1988); the majority of whites, "expect[ed] a vigilant government to protect their segregated neighborhoods" (Sugrue 1996, p63). These beliefs were intimately intertwined with opposition to public housing, which was viewed as "Socialist housing" (Los Angeles Times, March 23, 1952 p E1); specifically, public housing was viewed as, "a taxpayer-subsidized handout for the feckless" (Sugrue 1996, p63). Although a majority of the poor in central cities were white, racial minorities were disproportionately poor and poorly housed.[93] Many whites opposed public housing because they feared, "a change in the racial character of the neighborhood" (New York Times, April 13, 1952, p28). Efforts to locate low-income housing in home-owner neighborhoods and/or integrate white areas was viewed as a government assault on owners', "right to protect one's own property" (Thomas, William P., Letter to the Editor, Washington Post, February 27, 1949).

In order to prevent integration in housing, white homeowners organized neighborhood associations, encouraged vigilant city inspectors to fine overcrowded minority homes, sent hundreds of letters to city governments, turned out in droves at public hearings, and engaged in violent assaults on black residents (Sugrue 1996, Hirsch 1983). But defending white, home-owner neighborhoods was a zero-sum game. For every area that successfully halted integration or low-income housing, another had to absorb (or block) it. This led to a lack of unity among segregationist forces. At the same time, support for scientific racial categorization plummeted

[93] About 62% of persons below the poverty line in central cities were white in 1959. Approximately 14% of whites were poor compared to 41% of blacks (https://www2.census.gov/prod2/popscan/p60-068a.pdf, p7).

(Hayward 2013), and outright, public expressions of racism were, "placed on the defensive" (Hirsch 1983, p175, Schuman et al. 1985).

Advocates of open housing began to win concessions from the government. By 1945, in more than 200 cities, municipal authorities dedicated to maintaining peaceful race relations, established interracial commissions, committees, or agencies that advocated for civil rights reform (Hirsch 1983, p42). These often appeared in the wake of violent riots (Meyer 2000). The racial restrictive covenant, long used by real estate developers and homeowners' organizations to keep minorities out of white neighborhoods, became unenforceable with a Supreme Court decision in 1948 (Abrams 1955). Even before this decision, some municipal judges were refusing to enforce covenants (Hirsch 1983).

Because the government owned and operated public housing, it was an obvious target for constitutional claims of unequal treatment. As early as 1944, New York City enacted an ordinance prohibiting tax-exempt status for housing projects that denied access to tenants on the basis of race. The ordinance had been spearheaded by the city's interracial relations commission. In other places, civil rights organizations pressured municipal housing authorities to integrate public housing; the NAACP brought this matter before the court (Meyer 2000, Sugrue 1996). In 1953, the California Court of Appeals ruled in *Banks* v. *Housing Authority of San Francisco* that San Francisco's Housing Authority must assign residents to public housing without regard to race or color. When the Supreme Court declined to hear the appeal (thereby allowing California's ruling to stand), the case became precedent-setting. By 1954, 21 cities had passed some form of anti-discrimination law (Meyer 2000) and in 1962, President Kennedy signed an executive order,

> directing Federal departments and agencies to take every proper and legal action to prevent discrimination in the sale or lease of housing facilities owned or operated by the

> Federal Government; housing constructed or sold as a result of loans or grants to be made by the Federal Government; and housing to be available through the development or redevelopment of property under Federal slum clearance or urban renewal programs (Papers of Burke Marshall, Assistant Attorney General for Civil Rights).

Not only did cities and states pass anti-discrimination laws covering public housing, some also enacted open housing legislation that sought to prevent discrimination in the private housing market. The leader of the movement was again New York City, passing an ordinance prohibiting, "race, creed or national origin" discrimination in rental housing in 1957 (Bennett 1957b, p9). The ordinance was, "bitterly fought by property owners and real estate representatives" (Bennett 1957a, p7) and explicitly exempted room rentals in single-family homes or duplexes unless they were located in large housing developments (Bennett 1957b). Still, the passage of open housing laws represented clear policy change, largely emerging from the bottom-up. By 1968, 22 states had enacted fair housing laws that covered nearly all sales and rentals (Collins 2006). Such laws were passed in response to vocal, mobilized advocates in black and liberal white communities (Collins 2006). The 1968 Federal Fair Housing Act extended this coverage nationwide.

Despite such policy progress, even as of 1973, the General Social Survey found 64% of white respondents believed that a homeowner should be able to, "decide for himself whom to sell his house to, even if he prefers not to sell to Negroes" (GSS 1973), and a homeowners' rights movement arose in response to the open housing laws. In Detroit, a collection of neighborhood organizations gathered more than 44,000 signatures in support of a homeowners' right initiative (Chicago Tribune, July 13, 1963). The ordinance passed but was declared unconstitutional by the Wayne County Circuit Court in a suit brought by the NAACP (Chicago Defender, December 23, 1964, Sugrue 1996).

In California, after the state legislature passed a fair housing law known as the Rumford Act in 1963, a statewide campaign for its repeal was led by the California Real Estate Association and the California Apartment Owners Association who combined to form the Committee for Home Protection (Self 2003, Duscha 1964, Turner 1964). Proposition 14, confusingly referred to as "The California Fair Housing Initiative," prohibited the state from, "denying, limiting, or abridging the right of any person to decline to sell, lease, or rent residential real property to any person as he chooses."[94] In an analysis of the campaign for Proposition 14, Self (2003) and Brilliant (2010) show that supporters rarely invoked race in their arguments, focusing instead on freedom and property rights. Reporting on the initiative battle, the Washington Post quoted a pamphlet issued by the Committee for Home Protection that stated, "Those who stand for the preservation of individual property rights today are in direct line of descent from the patriots who endured the hardships of the long winter at Valley Forge with George Washington" (Duscha 1964, pA2). Prominent Democrats including Governor Edmund Brown opposed the initiative, and a number of "right-wing Republicans" including Ronald Reagan and Barry Goldwater were "extremely active" in support of the initiative (Duscha 1964, pA2). In the end, the initiative passed with more than 65 percent of the vote, even as Johnson won the presidential race decisively (Greenberg 1964, p1).

Scholars have identified varying patterns of opposition to open housing in different places. For instance, Sugrue (1996) shows that in Detroit, the staunchest integration resisters were working-class white ethnics who owned modest, single-family homes (see pp236-237). In Oakland, Self (2003) finds that it was *not* solely, "an anti-liberal white working class engaged in direct struggle with African American," but rather middle and upper-class whites who,

[94] SALES AND RENTALS OF RESIDENTIAL REAL PROPERTY California Proposition 14 (1964). http://repository.uchastings.edu/ca_ballot_props/672

"understood property rights as sacrosanct expressions of their personal freedom" (p168). Collins (2004) shows that states with higher union membership rates were more likely to pass fair housing legislation and Self (2003) provides evidence that the UAW campaigned against Proposition 14, although Brilliant (2010) argues that rank and file union members were staunchly opposed.

To better understand the individual correlates of opposition to open housing, I gathered data from the 1964 Field Poll in California.[95] Carried out in seven waves between January and October, the poll asked respondents about their support for the Rumford Act and Proposition 14. I recoded these questions to into a variable coded 1 if the respondent *Opposed Open Housing*.[96] I use logistic regression to regress this variable on several demographics including whether or not the respondent *Owns* (vs. rents) her home, her *Race* (coded 1 for white and 0 for nonwhite or other), her *Age*, her level of *Education*, whether or not the respondent or her spouse belongs to a *Union*, and her *Economic Level* (with higher values representing lower classes).[97] In addition, I include a measure indicating whether or not the respondent planned to vote for the *Democratic*

[95] Ideally, I would have analyzed the relationship between community segregation and public opinion on open housing. Unfortunately, the Field Poll recorded no geographic identifiers other than the very broad categories of Northern and Southern California.

[96] For waves 2, 3, and 5, I used the question about the Rumford Act. In waves 1 and 7, no Rumford Act question was asked, so I used a question about Proposition 14 instead. Waves 4 and 6 did not include open housing questions. The text of the questions are as follows: (Rumford Act) Well, as you know the Rumford Act is a Law which makes it illegal for apartment house owners, owners of publicly assisted housing, and real estate brokers to discriminate against anyone because of race, color, religion, national origin or ancestry in the renting or selling of housing accommodations. From what you know of it, do you approve or disapprove of the Rumford Act?" (Proposition 14) "If you were voting today, would you approve or disapprove of this addition to the state constitution? (the amendment reads as follows – prohibits state, subdivision, or agency thereof from denying, limiting, or abridging right of any person to decline to sell, lease, or rent residential real property to any person as he chooses. Prohibition not applicable to property owned by state or its subdivisions, property acquired by eminent domain, or transient lodging accommodations by hotels, motels, and similar public places." Where possible, I use the question about the Rumford Act instead of Proposition 14, because the waves included very different wording of the Proposition question (adding more and less detail about the content).

[97] The coding of this variable is obscure. The codebook suggests that 10 categories were used and lists the following labels "upper," "upper middle," "upper middle," "middle," "middle," "middle," "lower middle," "lower middle," "lower," and "lower." One can only assume that the coders were instructed in some way to make distinctions across categories.

Presidential ticket (Johnson/Humphrey). I cluster the standard errors by poll wave. The results, presented in Table 4.4 paint a clear picture confirming and undermining various aspects of the historical accounts. Summary statistics are presented in Table A4.2.

Table 4.4: Demographic Characteristics of Open Housing Opponents

	β	Std. Err.	P>|t|
Home Owner	0.193	0.065	0.003
White	1.205	0.412	0.003
Education Level	-0.177	0.035	0.000
Union Member	0.284	0.111	0.011
Age	-0.004	0.053	0.934
Economic Level	0.003	0.026	0.897
Democratic Presidential Voter	-0.896	0.386	0.020
Constant	0.33	0.334	0.323
N	4,860		
R^2	0.0575		

Note: Logistic regression with errors clustered by poll wave.

White homeowners were clearly in opposition to open housing, as were less educated respondents, Republicans, and union members. After controlling for these characteristics, economic status and age played no role in the determination of political opinions on open housing. Since the earliest years of the century, the most consistent opponents of integration have been white homeowners who came to view the protection of their neighborhoods as a right to be protected by government. These residents understood the "very essence" of Proposition 14 to be the avoidance of, "state involvement in private decisions in the sale of rental of privately owned residential property" (Blake 1964, pK1).

In 1966, the California Supreme Court declared Proposition 14 in violation of the Constitution, and the Rumford Act was allowed to stand. However, the lack of support for open housing among whites and owners would prove to be a formidable barrier for integrationists. Collins (2004) reveals that fair housing policy had little effect on black housing market outcomes

and did nothing to affect levels of segregation. The changes local communities experienced during post-war period would have other long lasting effects. When California voters overwhelmingly supported Proposition 14, they also overwhelmingly supported Johnson (over Goldwater) for president. Many contemporaries and scholars would explain this apparent inconsistency as Mark Brilliant (2010) does:

> Californians who voted *for* Prop 14 but *against* Goldwater were not so much signaling a wholesale rejection of civil rights…They were, however, hoisting a 'no trespassing' sign. They drew a line that cordoned off a more public sphere where the state could and should protect against discrimination from a more private sphere where no such state laws could tread (p206).

As Kruse (2005) so forcefully demonstrates, and I quantify in Chapter 7, this turn toward understanding neighborhood protection as a right (rather than a racist act), did not, in fact, represent an expression of newly discovered profound principles. It was, rather, a means to a segregationist end, and would serve as the rhetorical foundation for a rising conservative movement. More immediately, the rise of black candidacies, the advancements of the Black Power and Civil Rights movements, and the changes to public policy encompassed in the Voting Rights and Fair Housing Acts all threatened white control over central cities. At the same time, numerous federal and local policies made suburban living an attractive option – one that would offer white homeowners more complete control over the political arena. The next chapters offer evidence of these patterns.

Chapter 5: The Rise of Suburban Segregation, 1970-2011

In 2012, the Manhattan Institute issued a report entitled "The End of the Segregated Century," declaring that, "all-white neighborhoods are effectively extinct," (Glaeser and Vigdor 2012). Though not all demographers shared the optimism of Glaeser and Vigdor, many trumpeted the decline of neighborhood segregation in America following the release of the 2010 Census (Frey 2014). While segregation *between neighborhoods* has declined, another type of segregation has remained remarkably stable, even rising in the post-war period. Segregation *between cities* is persistent along both race and economic lines (Fischer et al 2004, Massey and Hajnal 1995). This means that while integration within cities has increased, cities as a whole have become less racially and economically diverse over time. As a result, a greater share of total segregation in metropolitan areas is now accounted for across cities rather than within them (see Chapter 1). This is what is commonly understood as the process of suburbanization.

While we have substantial evidence on the role federal policies have played in generating suburbanization (Jackson 1985, Massey and Denton 1993, Hayward 2013), our understanding of the ways in which local politics affects suburbanization has been limited. In previous chapters, I argued that segregation was pursued by local governments in order to enhance property values and make it possible to target local public goods towards white homeowners and land-oriented businesses. Such strategies, combined with political control of city councils and mayors' offices, ensured that local governments operated to protect the homogeneity of white homeowner neighborhoods and provide them with disproportionate benefits. In the post-war period, this control was threatened by increasing minority electoral participation and policy achievements. Here, I demonstrate that these changes contributed to suburbanization.

The analyses in this chapter rely on a measure of segregation that incorporates patterns of sorting both within cities and between cities and suburbs. This strategy offers an advancement over previous scholarship because it allows for a consideration of residential sorting at multiple geographic levels at the same time. Most scholars focus either on metropolitan level segregation (e.g. Dreier et al. 2004, Jackson 1985) or neighborhood segregation (e.g. Massey and Denton 1993) – but these types of sorting are intricately linked. By drawing on a nested measure of segregation for all metropolitan areas over a long time span (1980-2011), I am able to show that residents traded one type of homogeneity for another in response to political outcomes. I utilize time lags and metro area fixed effects to handle the problem of endogeneity, as race and class sorting can, in turn, generate different political outcomes (Massey and Hajnal 1995, Friesema 1969, Nelson 1992). In this chapter, I analyze the relationships between cities within metropolitan areas. I concentrate on the ways in which the politics of the central city (the city with the largest population in the metro area) affects demographic residential patterns in the suburbs. I find that when central cities elect minority mayors, when central city expenditures are higher and favor policing, a greater share of metropolitan area segregation is accounted for between cities rather than within them. I also show that in metropolitan areas where land use regulations are stricter in the suburbs than in central cities, more segregation is accounted for across cities. In short, when central city politics do not favor their interests, white and upper class residents are more likely to reside in different cities rather than in different neighborhoods and they lock in these sorting patterns through public policy. In the final section of the chapter, I show that communities with more whites and homeowners receive a disproportionate share of municipal spending.

Understanding the Link Between Segregation and Suburbanization

People choose where they live based, in part, on the types and quality of public goods and services provided in a community, as well as the taxes required to provide those goods and services (Tiebout 1956, Ely and Teske 2015, Banzhaf and Walsh 2008). However, not all residents are equally able to match these preferences with housing location. Low-income households have less choice than do high-income households because amenities (including schools, parks, and public safety) are capitalized into housing prices and rents. Racial and ethnic minority households have also been severely limited in their ability to live where they choose. In part, this is the due to the fact that minorities have lower average levels of income and wealth. But, as previous chapters have shown, it is also the result of concerted efforts by white homeowners to segregate them.

The long history of enforced racial segregation in America has been well documented. Between 1900 and 1940, neighborhood-level residential segregation expanded dramatically throughout the United States (Cutler, Glaeser, and Vigdor 1999). A variety of mechanisms ghettoized racial and ethnic minorities including violence and intimidation perpetrated by white residents, restrictive covenants written into housing deeds, and racial steering by real estate agents (McWilliams 1964, Sugrue 1996, Kruse 2005, Lassiter 2006). As previous chapters have shown, local, state, and federal policies also worked to establish and perpetuate segregation along race and class lines. Through actions like the passage of racial zoning ordinances (Chapter 2), the generation of neighborhood investment ratings through the Home Owners Loan Corporation (Hillier 2005), and official acquiescence to violent activity in protection of homes and neighborhoods (Hirsch 1983), governments pursued policies that limited the mobility of minority households (Ross 2008) between 1900 and 1940.

Around the time of the Second World War, patterns and strategies of segregation began to change. Segregation levels within cities leveled off, but ghettos grew much larger when minority populations increased in cities outside of the South (Cutler, Glaeser, and Vigdor 1999). Similar to previous decades, white homeowners utilized a variety of mechanisms to bar minorities and renters from moving to their communities. Organizing collectively through homeowners' associations, white homeowners controlled government decision making on matters such as the razing of slums, the rebuilding of downtowns, the placement of public housing, and zoning decisions that concentrated negative externalities in poor and minority neighborhoods.

However, as Chapter 4 revealed, starting slowly during the 1940s and then more rapidly during the 1950s and 1960s, white homeowners began to see their exclusive political control chipped away. The massive influx of wartime workers dramatically changed the racial and socioeconomic makeup of many large cities. In the 157 cities that had populations of at least 50,000 in 1940, the white population share declined about eight percentage points between 1940 and 1970 (from 90 to 82). By 2011, the white share of these cities decreased drastically to 52%. However, the share of renters *also* declined during this period, as homeownership rates expanded.[98] At the same time, black and Latino Americans' sustained battle for civil, economic, and political rights gained ground. As racial minorities began to contest and even win political representation, the open housing movement brought the possibility of neighborhood integration, and civil unrest coursed through many large cities. This period became fraught with uncertainty

[98] I only have time series data on homeownership rates for 60 cities. In these places, the share of homeowners rose from 35% in 1940 to 48% in 1970. Nationwide, the homeownership rate expanded from 43.6% to 63% during this period (Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1970). http://www.census.gov/library/publications/1975/compendia/hist_stats_colonial-1970.html

and fear for many whites placed an increasingly high value on segregation as they joined the ranks of homeowners.

Cutler, Glaeser, and Vigdor (1999) provide evidence that since the 1990s, white homebuyers' willingness to pay a premium for homogenous neighborhoods is the central factor perpetuating segregation. Overt racism has decreased dramatically over the last several decades (Schuman et al., 1997), but whites continue to express a preference for same race neighbors (Charles 2003) and minority neighborhoods continue to be perceived as having poor-quality amenities (Bobo, Kluegel, and Smith 1997, Ellen 2000, Emerson, Chai, and Yancey 2001, Krysan 2002, Bayer, Ferreira, and McMillian 2007). Ellen (2000) shows that a growing black population leads whites to leave neighborhoods and/or be unwilling to enter them. Card, Mas, and Rothstein (2008) report a distribution of tipping points (the size of the minority population that affects white population flows) ranging from 5% to 20%. Once a neighborhood reaches the tipping point, it quickly becomes predominantly inhabited by racial and ethnic minorities. White preferences for homogeneity are undoubtedly enhanced by persistent discrimination in the real estate and mortgage industries which limit minority access to some neighborhoods (Pager and Shepherd 2008, Gaslter and Godfrey 2005, Bobo 2001, Farley et al. 1994, Bobo and Zubrinski 1996).

However, while white preferences for white neighbors help to make sense of the fact that whites live in different *neighborhoods* than nonwhites, they do not help to clarify why whites live in different *cities*. Why, even as neighborhoods have grown more integrated, have cities become less so? The answer is politics and political control. Boustan (2010) finds that residents are willing to pay a 7% premium on housing in order to live in a higher-income suburb, in part, to gain access to higher school quality and lower property tax rates. Baum-Snow and Lutz

(2011) and Lassiter (2006) provide evidence that court-ordered integration of city schools led some white parents to seek out homogenous, suburban school districts. Kruse (2005) shows that when Atlanta's whites lost segregation battles and political control, many chose suburban homes. I build on the findings of these scholars to show that suburban sorting along race and class lines is also linked to central city elections of minority mayors, larger city budgets and a greater share of spending on police.

The rapid increase in the population of the suburbs during the post-war period was mostly not the result of white flight. Rather, rising incomes, low-cost federally-backed mortgages, the lucrative federal mortgage deduction, new housing construction in suburban tracts, and an extensive highway system all worked to bring residents to the periphery (Gotham 2000, Nall forthcoming). Yet, in the early decades of the post-war period, suburban living was much more accessible to whites and homeowners than to people of color and renters (Kruse and Sugrue 2006, Jackson 1985). This pattern eventually changed, allowing many racial minorities and renters live in suburban communities today (Frasure-Yokely 2016). However, as Briffault (1990) explains, "the increased heterogeneity of suburbia as a whole is usually not matched by a greater diversification *within* particular suburbs. There are now more poor and working-class people, more minorities and more industrial and commercial sites in suburbia. But poorer, working-class or black suburbanites are likely to live in different jurisdictions separate from those inhabited by affluent or white suburbanites" (p353). These trends have converged to increase divisions along race and class lines across city lines (C.S. Fischer et al. 2004, M.J. Fischer 2008).

In previous decades, processes of consolidation and annexation made city boundaries malleable so that those moving away from the center of the city would have resided within city

limits (Teaford 1979). However, in the post-war period, state annexation laws changed and political boundaries ceased to keep pace with residential spread (Briffault 1990). As a result, the number of incorporated municipalities in metropolitan areas grew and suburbs gained population, economic activity, and political power (Danielson 1976, Miller 1981, Burns 1994).

As independent municipalities, suburbs have the power to regulate land use for all parcels within their borders. Local governments employ land use regulations to manage the character of their community. Consequently, regulatory environments vary significantly from place to place. Cities are capable of enacting minimum lot sizes so that all development must be located on a certain acreage of land, requiring developers to preserve open space in their development, determining the number of multi-family units that will be allowed within city limits, requiring developers to pay a share of infrastructure improvements associated with new development, offering short/long review periods for zoning changes and building permits, and involving few or many local actors in the approval and planning process. Gyourko et al. (2008) find that there is a strong, positive correlation between different regulations. Specifically, if a city regulates in one area, it is significantly more likely to regulate in other areas as well. Einstein et al (2017) provide evidence that the accumulation of regulations reduces the supply of multi-family housing by allowing residents opposed to development to delay the process and file lawsuits. Gyourko et al (2008) also find that community wealth is positively related to regulatory environments. Places with high median home values, more college-educated residents, and higher incomes are most likely to police land use.

Public Opinion on Local Spending

In order for political preferences to be related to population sorting, it must be the case that different groups have different orientations toward government spending and different

policy priorities. At the national level, the gap between white and nonwhite support for government programs like social services, education, and assistance to the poor, as well as beliefs about the optimal size of government is persistent, systematic, and substantively large (Kinder and Winter 2001, Winter 2006, Jackman 1994, Tate 1994, Kinder and Sanders 1996, Dawson 1994, Bowler and Segura 2011). A related, but distinct gap between high and low socioeconomic status individuals also exists (Gilens 2005, Bartels 2008). Whites and the affluent tend to favor limited government while people of color and those of lower socioeconomic status are more supportive of spending and intervention. In an overview of this large literature, Hutchings and Valentino (2004) explain that the black/white opinion gap typically ranges from 35-50 points on matters dealing with race (like affirmative action and government aid to minorities), and more than 20 points on policies that are not explicitly racial, like government spending on welfare, social services, and education (see also Winter 2006, Federico and Luks 2005, Sears, Hensler, and Speer 1979, Kinder and Sears 1981).

There is less research on these questions at the local level, but scholars have found large racial and socioeconomic status divides with regard to candidate choice (Hajnal and Trounstine 2013b, Hajnal 2009), satisfaction with city services (Hajnal and Trounstine 2013a, Van Ryzin et al. 2004, Durand 1976), and trust in government (Rahn and Rudolph 2005, Marschall and Shah 2007). Hajnal and Trounstine (2013b) find that the largest divide in support for mayoral candidates is black versus white residents, with the divide between Latinos and whites close behind. The divide between Asians and whites is smaller, but persistent, as is the divide between high and low socioeconomic status individuals. In an analysis of the determinants of service evaluations among local residents, Hajnal and Trounstine (2013a) find that race stands out as the most powerful predictor. Again, the largest divides are between black and white and Latino and

white respondents, but class divides are also significant. In sum, white and wealthy residents tend to have more conservative spending preferences and support different candidates than do minorities and the poor at both the local and national levels. When political patterns favor nonwhite and poor interests, white and upper-class residents are inclined to select different localities. In the next sections, I provide evidence of these political contributors to segregation.

Measuring Suburbanization, A New Approach

In order to show that political outcomes affect segregation across city lines, I use a segregation measure that can be decomposed into within-city and across-city components. This measure allows me to take advantage of different predictions depending on the level at which segregation occurs and to control for aggregate preferences for homogeneity. In some metropolitan areas, whites and homeowners tend to be segregated from nonwhites and renters in different neighborhoods (indicating segregation at a low level of geography). In others, race and class sorting is more prevalent across city lines (indicating segregation at a higher level of geography). If a city increases its budget, there is no reason to believe that this would induce residents to sort into different *neighborhoods* but, I argue, it could lead to sorting into a different *city*.

While households may choose residential locations that result in more homogenous neighborhoods for a variety of reasons, only cross-city segregation ought to be affected by the *total* bundle of public goods provided by the city and the election of city officials. Because different racial and economic groups have different preferences for local representatives and policies, when budgets or election outcomes are less favorable to white and homeowner preferences, these residents should be more likely to sort into residential locations outside of city

boundaries.[99] We most commonly think of segregation across city lines as a process of suburbanization, but sorting between suburbs is another version of the same pattern. The result should be an increase in the share of metropolitan segregation across cities as opposed to within them.

To determine whether or not city political patterns favoring nonwhite and renter interests affect metropolitan segregation, I constructed a dataset measuring segregation in primary metropolitan statistical areas from 1980-2011 GeoLytics' Neighborhood Change Database (NCDB) and the 2007-2011 American Community Survey. These data allowed me to create a panel dataset measuring segregation at the census-tract level for each metropolitan area. To measure segregation, I use the *H* Index described in Chapter 1. The *H* Index allows for decomposition of within-city and across-city components.[100] It measures the evenness of dispersal of groups across geographic units (in this case, Census tracts, cities, and metropolitan areas).

The groups I use to calculate the *H* Index here are white/nonwhite, renter/homeowner, and wealthy/non-wealthy. Since 1980, the Census has tabulated the number of residents in each Census tract that self-identify as racially white and ethnically not-Latino; these individuals are classified as whites in my analysis. All other racial/ethnic combinations are classified as

[99] There is no evidence that the inverse is true. When budgets favor white/wealthy preferences, poor and minority residents have not been found to move to communities that prioritize their demands and needs. For instance, Levine and Zimmerman (1999) investigate the potential for states' welfare programs to act as magnets for the poor. They find little support for this hypothesis. The process of gentrification – where affluent residents return to the central city – is another scenario that could lead to movement among poor residents. Here too, scholars have found no evidence that gentrification leads poor households to leave their housing units (Vigdor, Massey, Rivlin 2002). The most likely explanation, of course, is that it is whites and the wealthy who have had the greater ability to choose where they live. Beyond this, political outcomes are typically much more responsive to the preferences of whites and the wealthy (Hajnal 2009; Gilens 2014).

[100] The approach is similar to the one taken by C.S. Fischer et al. (2004) who analyze trends over time in the level at which segregation occurs. In contrast to C.S. Fischer et al. (2004), I seek to determine whether such patterns are related to city policy choices, not just time.

nonwhites. The Census gathers tenure information on all occupied housing units, noting whether they are rented or owned. The share of units rented versus owned comprises my measure of segregation. Finally, the Census reports income categorically, not continuously, so wealthy refers to the share of families in each census tract with incomes above particular thresholds for each census year. [101] These thresholds were determined by calculating the average family income for all Census tracts in the United States for each Census year. The wealthy threshold represents the income bin with its starting point closest to the 90th percentile of the distribution. The thresholds for each census year are: $35,000 for 1980, $75,000 for 1990, $100,000 for 2000, and $150,000 for 2011. All families with this amount of income or more are included as wealthy.[102]

As explained in Chapter 1, the *H* Index measures the degree to which the diversity of subunits differs from the diversity of the larger unit, expressed as a fraction of the larger unit's total diversity and weighted by the subunit's share of the total population. For each census year, I calculate an *H* Index for all cities within a metropolitan area, denoted H_{m_c} and all tracts within each city, denoted H_{c_t}.[103] These *H* Indices reveal how diverse each census tract is given the diversity of the city and how diverse each city is given the diversity of the metropolitan area.

$$H_{m_c} = \sum_{c=1}^{C} \frac{P_c}{P_m}\left(\frac{E_m - E_c}{E_m}\right)$$

[101] I use family as opposed to household income because the NCDB does not report household income at the tract level.

[102] Census tracts range from 0 to 100% wealthy, with a mean of 18%, a median of 13%, and a standard deviation of 16%.

[103] Census tracts are perfectly nested within states and counties. However, in some cases tracts cross city lines. In these cases, GeoLytics assigned the tract to the city containing the largest share of the tract population. In 2011, tracts are weighted by the share of population contained in each city. Observations are unique when defined by year, tract, city, county, and metropolitan area. Tracts located in unincorporated areas within a metropolitan area are combined as a single unincorporated unit. Tracts outside of metropolitan areas are not included in the analysis. I use Metropolitan Statistical Areas and where possible, Primary Metropolitan Statistical Areas as the highest level of aggregation (not Consolidated Metropolitan Statistical Areas which are much larger).

$$H_{c_t} = \sum_{t=1}^{T} \frac{P_t}{P_c}\left(\frac{E_c - E_t}{E_c}\right)$$

P represents total population of the geography *t*, *c*, or *m*.

These two indices can be combined produce a total *H* Index for the metropolitan area which is equal to the *H* Index calculated for the metropolitan area at the tract level, H_{m_t}.

$$H_{m_t} = \sum_{t=1}^{T} \frac{P_t}{P_m}\left(\frac{E_m - E_t}{E_m}\right) = H_{m_c} + \sum_{c=1}^{C} \left(\frac{P_c}{P_m}\right)\left(\frac{E_c}{E_m}\right) H_{c_t}$$

I analyze the percentage of total metropolitan area segregation that can be attributed to cross-city segregation as opposed to within-city segregation. I have one observation per metropolitan area in 1980, 1990, 2000, and 2011. The dependent variable in my analyses is the share of total segregation in a metropolitan area that is determined by segregation across cities versus within them:

$$share_across = \frac{H_{m_c}}{H_{m_t}}$$

My argument is that city politics affects segregation patterns. Because I only have one measure of segregation for each metropolitan area, I analyze the effect on segregation of city politics in the city with the largest population in the metropolitan area. For example, in the Detroit-Warren-Livonia metropolitan area, I estimate the relationship between Detroit's city expenditures and the share of metropolitan segregation that is attributed to whites living in different cities than nonwhites (which happens to rise from 51% to 88% between 1970 and 2011). Table 5.1 provides aggregate descriptive statistics for the central cities versus non-central cities in my analysis as of 2011.

Table 5.1: Central vs. Non-Central Cities, 2011

	Central Cities	Suburbs
% White	58%	73%
% Black	19%	9%
% Latino	16%	12%
% Asian	4%	4%
% in Poverty	21%	12%
% Renters	47%	32%
Median HH Income	$42,796	$61,670
% Wealthy	9%	13%
N	323	4,145

The table reveals that suburbs are whiter, wealthier, and filled with more homeowners than central cities.

In Chapter 4, I argued that in the postwar period, white homeowner neighborhoods felt threatened by increasing electoral contestation by minority candidates and the successes of the open housing movement. Public opinion surveys reveal that racial and income groups are divided over the proper size of government. Further, studies have shown that white opinion on government spending is powerfully shaped by attitudes toward the group perceived to be the beneficiaries of the spending (Nelson and Kinder 1996). During the 1960s and 1970s many central cities became associated with rising crime rates (Wilson 1987). Today, whites link crime and criminality with blackness (Peffley Shields, and Williams 1994; Gilliam and Iyengar 2000, Gilliam et al 1996). For wealthy, white, homeowners with the ability to choose suburban living, it is plausible that the election of minority mayors, increases in the municipal budget, and shares of the budget going toward policing in central cities all may have played a role in encouraging segregation across city lines.

To analyze these relationships, I regress the share of metropolitan area segregation determined across cities on independent variables capturing political and policy control in the

central city. The first is a variable noting whether or not the central city had a *Minority Mayor* (African American, Hispanic, or Asian) at any point in the decade prior to the year in which segregation is measured. These data are from a number of different sources, including Vogl (2014), Hopkins and McCabe (2012), and my own research using websites and newspaper accounts of elections. The variable is a dummy variable coded 1 if the central city had a minority mayor and coded 0 if the mayor was white in all years of the prior decade. Next I add two spending measures: inflation-adjusted *Direct General Expenditure Per Capita* and the proportion of the city budget spent on *Policing.*[104] These variables come from the Census of Governments State and Local Government Finance files from 1977 to 2012.[105] The data are collected in years that end with 2 and 7 and I used linear interpolation to generate estimates of city expenditures in 1980, 1990, 2000, and 2011 to match the Census population data. I add the natural log of the *Population* as a control because large cities have different spending patterns than small cities and size may affect segregation patterns by offering residents greater ability to sort themselves into like neighborhoods. Finally, I add a measure of the *Violent Crime Rate* in the central city to capture local conditions to which both policy and movers might have reacted.[106] These data represent 209 metropolitan areas and include a total of 618 observations. Summary statistics are included in appendix Table A5.1.

There is an obvious endogeneity problem with the assertion that city elections and budgets can affect residential locations. That is, we know that as home-owning whites choose to

[104] Police protection expenditures include, "expenditures for general police, sheriff, state police, and other governmental departments that preserve law and order, protect persons and property from illegal acts, and work to prevent, control, investigate, and reduce crime" Pages 5-58 in The U.S. Bureau of the Census Government Finance and Employment Classification Manual available at: http://www2.census.gov/govs/pubs/classification/2006_classification_manual.pdf

[105] [105]Available at http://www2.census.gov/pub/outgoing/govs/special60/. Filename is "_IndFin_1967-2012.zip"

[106] These data are from the Department of Justice Uniform Crime Reporting Program: Offenses Known and Clearances by Arrest reports for 1980, 1990, 2000, and 2011.

locate in the suburbs as opposed to central cities, the remaining central city population will have different policy and candidate preferences. The success of black mayoral candidates in this scenario is what Friesema (1969) called the "Hollow Prize." To attempt to mitigate problems this pattern might cause for the analysis, the mayoral data are measured in the decade prior to the segregation data and all of the remaining measures are lagged 10 years. Additionally, my analyses include fixed effects for metropolitan area, so that the estimated effects of politics are within, rather than across areas.

Is it the case that politics favoring nonwhite and poor preferences in central cities is associated with additional cross-city segregation? In short, yes. Table 5.2 presents the results.

Table 5.2: Effect of City Spending Patterns on Share of Metropolitan Segregation Attributed to Cross-City Segregation

	Racial Segregation			Renter Segregation			Wealth Segregation		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Politics favoring minorities & renters									
Minority Mayor	0.032	0.01	0.01	0.019	0.01	0.08	0.027	0.01	0.01
Direct General Expenditure Per Cap	0.052	0.01	0.00	-0.004	0.01	0.58	0.013	0.01	0.07
% Policing	0.723	0.14	0.00	-0.223	0.12	0.06	0.458	0.12	0.00
Controls									
Population (logged)	0.046	0.03	0.12	-0.057	0.03	0.03	-0.013	0.03	0.60
Crime Rate	0.566	0.13	0.00	0.134	0.11	0.24	0.159	0.11	0.15
Constant	-0.380	0.35	0.28	1.051	0.31	0.00	0.341	0.30	0.25
Number of observations	618			618			618		
Number of MSAs	209			209			209		
R^2 (within)	0.211			0.035			0.078		

Note: OLS Regressions, fixed effects for metro area included in all models
Minority mayor refers to previous decade, all other measures lagged 10 years

Table 5.2 tells a consistent story. When central cities elect minority mayors, when the spend more money, and when a larger proportion of their budget is spent on policing a larger proportion of the metropolitan area's total segregation along race and class lines is accounted for across cities rather than within them. In short, more liberal policy in the central city leads to more segregation across city lines while more conservative spending patterns in center cities lead to less. As Table 5.1 makes clear, non-central cities are whiter, wealthier, and more heavily populated with homeowners than central cities. This suggests that it is wealthy whites who make the choice to reside outside of the central city when policies favoring poor and minority interests are enacted. Conversely, wealthy white residents choose to remain in the central city when budgets are more austere. Overall, the results are strongest and most consistent for racial segregation. As has been true throughout this book, race is the clearer dividing line.

With regard to racial segregation in particular, the results are powerful. If we compare, on the one hand, a city with a white mayor in the 25th percentile of the distribution on per capita spending and police expenditure, to one with a minority mayor and in the 75th percentile on the

spending measures, the metro-area racial segregation accounted for across cities increases from 35% to 46%. This is equivalent to the difference between the patterns of segregation in the Wichita, Kansas area (*share_across_race* = 0.355), and the Waco, Texas area (*share_across_race* = 0.468) or the Charlotte, North Carolina area (*share_across_race* = 0.358) and the Portland, Oregon area (*share_across_race* = 0.465).[107]

Land Use Regulation and Suburban Segregation

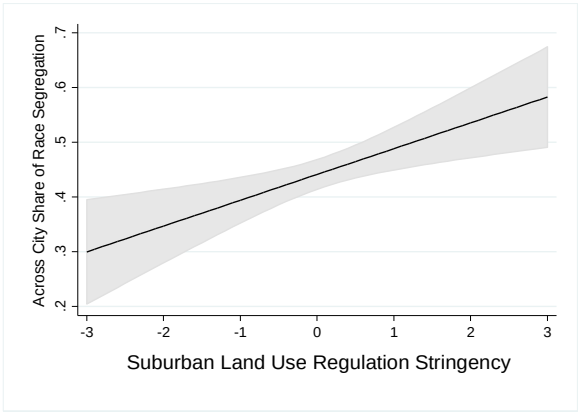
A number of scholars have emphasized the increasing role of land use regulation in the maintenance of segregation (Rothwell 2011, Pendall 2000, Orfield 2002). Scholars have often argued (although not demonstrated), that this tendency has generated a shift from the predominance of racial segregation toward class segregation (Mieszkowski and Mills 1993, Fischel 2004). The work that empirically investigates the relationship between land use regulation and segregation (e.g. Rothwell and Massey 2009, Glaeser and Ward 2006, Berry 2001) has not made a distinction between segregation within cities and segregation across them. This is an important omission, because homogenous suburban municipalities ought to be able to utilize land use regulation much more effectively than homogenous neighborhoods within cities, as municipalities wield more political power. If my argument is correct, that whites and homeowners seek to use local policy to protect home values and control the distribution of public goods, then metropolitan areas with more intense land use regulation in the suburbs should also have greater race and class segregation across cities. This is exactly what I find.

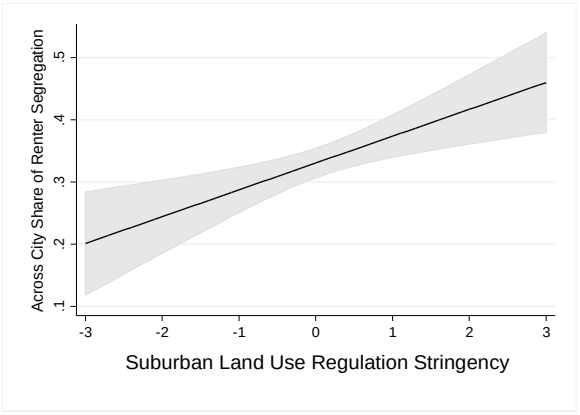
To provide evidence of this link, I use the Wharton Residential Land Use Regulatory Index (WRLURI) developed by Gyourko, Saiz, and Summers (2008). This index is built from a 2006 survey of local governments regarding the characteristics of the regulatory process, rules of

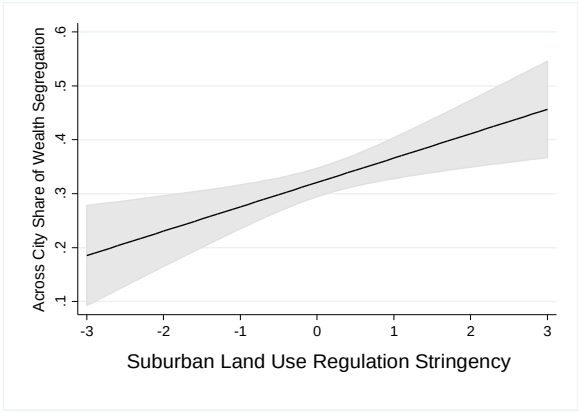
[107] These statistics are for the year 2011.

local residential land use regulation, and regulatory outcomes. These data were combined to measure the, "stringency of the local regulatory environment in each community" (Gyourko et al. 2008, p3). The survey contains data for more than 2,700 municipalities. For each metropolitan area, I determined the average WRLURI for all suburban communities. I then calculated the difference between the center city WRLURI and suburban WRLURI. This difference measure provides an estimate of the degree to which suburban municipalities have more stringent land use regulations than the central city for each metro area. I combined these data with the segregation measures described in the previous analyses – the share of the metropolitan area segregation accounted for across cities rather than within them. The WRLURI data are only available at one point in time, so I analyze the correlation between each region's *Share Across* and the *WRLURI Difference* in 2011 using OLS regression. Figure 5.3 displays the marginal effect of suburban land use regulation stringency on race, renter, and wealth segregation across cities.

Figure 5.1: Correlation Between Suburban Land Use Regulation Stringency & Segregation Across Cities







Suburban land use controls are significantly related to the degree to which segregation is accounted for across rather than within cities in metropolitan areas. The graphs also make clear that there is no difference between the effects of land use regulation on race versus class segregation. They are equally effected.

I've argued that white homeowners institutionalized segregation in order to protect their public goods and property values. The result of these policies in the post-war period has been to increase the disparity in service provision across cities. To show this, I draw on the same spending and segregation data described in the previous section. First, I aggregate all inflation-adjusted expenditures per capita by metropolitan area, for each year. This total expenditures per capita variable represents the collective dollars spent by municipal governments in a metropolitan area. I divide each municipality's expenditure by this total to generate the share of metropolitan spending accounted for by each city. I calculate a similar measure for population, generating the share of metropolitan population accounted for by each city. The ratio of these two quantities, the *Spending Equity Ratio*, is my first dependent variable.

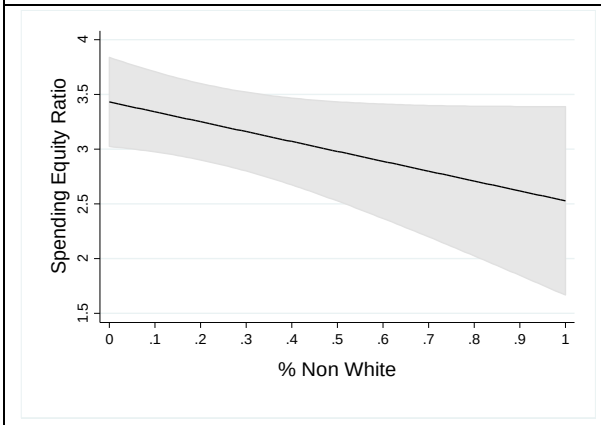
$$Spending\ Equity\ Ratio_j = \frac{E_j/E}{P_j}$$

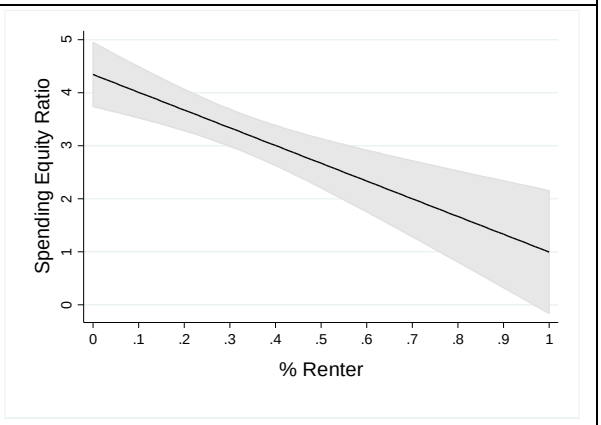
Where E_j is the per capita expenditure by city j, E is the total expenditures in the metropolitan area, and P_j is the share of the metropolitan population represented by city j.

This ratio measures the disparity between the percentage of the population represented by a city and the percentage of total resources received by that population. If resources are distributed exactly equally across the population, the ratio takes a value of 1; values less than 1 indicate that the community receives fewer resources than its population size would predict, and values greater than 1 indicate an abundance of resources. Between 1972 and 2012, this measure averaged 0.4 for central cities and 2.5 for suburbs.[108] Suburban residents receive two and a half times the resources that their population share justifies, while central city residents receive less than half of the amount of resources that their population share justifies. This is the case despite the fact that central cities spend more, on average, per resident than do suburbs. Unsurprisingly, communities with larger populations of racial and ethnic minorities and more renters have a lower *Spending Equity Ratio*. Regressing the *Spending Equity Ratio* on the share of the city that is *Nonwhite* and the share that *Rents* their homes, including fixed effects for years and errors clustered by metropolitan area, yields Figure 5.2.

[108] Calculated for all cities with more than 1,000 residents and all metropolitan areas in which I have data on more than one city.

Figure 5.2: Effect of Race and Class on Spending Equity





Given that cities with more homeowners and more white residents are more likely to garner a larger share of total resources spent in metropolitan areas, we should also expect that metropolitan areas with more segregation along race and class lines will witness more variation in spending from city to city. This is exactly what I find. My dependent variable in this analysis is a measure developed by Rhode and Strumpf (2003) called the coefficient of variation (CV). The CV captures the degree of heterogeneity in spending for a metropolitan area. It is calculated as the ratio of the standard deviation of spending to the mean of spending.

$$CV_{msa} = \frac{\sqrt{\sum_j P_j \left(E_j - M\right)^2}}{M}$$

Where E_j is the per capita expenditure of city j, M is the mean per capita expenditure for all cities in the metropolitan area, and P_j is the share of the total metro area population in city j. Rhode and Strumpf (2003) use this measure (calculated for the entire nation, not by metropolitan area) to show that over time, governments across the United States have grown more alike in their spending. I find the same – the mean CV declined about 17.5% between 1972 and 2012, from

1.32 to 1.09. However, more segregated metropolitan areas changed more slowly than less segregated areas. To see this, I regress the CV on racial, renter, and wealth segregation across cities (H_{m_c}). I add fixed effects for year to account for the declining time trend. Table 5.3 presents the results.

Table 5.3: Correlation Between Spending Heterogeneity and Segregation

	Column 1		
	β	Std. Err	P>|t|
Racial Segregation Across Cities	1.02	0.321	0.001
Renter Segregation Across Cities	1.83	0.661	0.006
Wealth Segregation Across Cities	-0.086	0.917	0.925
Constant	1.295	0.066	0.000
N	3149		
R^2	0.031		

Note: Fixed effects for year included but not presented.

The data reveal that metropolitan areas with more racial and renter segregation across cities – that is, where whites/ nonwhites, renters, and owners tend to live in different municipalities, we see more heterogeneity in municipal budgets. Combined with the results presented in Figure 5.2, we can see that communities with large populations of renters and racial minorities in segregated metropolitan areas have access to a much smaller share of the total dollars spent by local governments. Segregation is correlated with inequality; exactly as its architects intended.

Conclusion

Even after decades of progressive change in racial attitudes and growing concern over income inequality, America remains a segregated nation. Increasingly, segregation along race and class lines has occurred among cities rather than within them. I have argued that city politics has played a role in this change. Overall, whites and the wealthy individuals seek smaller, less

active local governments. When city policy does not favor their interests, these types of residents are more likely to trade homogenous neighborhoods within cities for homogenous cities instead. When central cities in metropolitan areas have more active policy agendas, when they spend more on community development, and when property taxes are higher, we see greater segregation across city lines. Whether this is because white homeowners leave central cities or never move in, the result is a higher degree of separation between cities in metropolitan areas. These patterns become fixed by suburban land use regulations that shape the character and structure of these communities.

Chapter 6: Segregation and Public Goods Provision, 1982-2012

Chapter 5 revealed that suburbanization has produced inequalities in spending patterns from city-to-city and I have argued that this was precisely the goal segregations' proponents. But segregation has another set of consequences that we might say were unintended; consequences for the polarization of politics at both the local and national levels. This chapter and the next make a case for this claim.

Many United States cities function without regular problems. They have well-kept roads, sewers that never overflow, and public parks with swing sets and restrooms. Others, however, struggle to maintain balanced budgets, fail to adequately equip or staff their police forces, and offer little assistance to residents of limited means. What explains these differences? One obvious answer is simply wealth. The history of suburbanization detailed in previous chapters suggests that whites and homeowners have ensconced themselves in homogenous municipalities. Given the strong correlation between race, property ownership, and wealth, income differences across communities could explain much of this variation. Except they don't. Although the relationship is statistically significant, the correlation between city level median income and per capita direct general expenditure is only about 0.037 in my data.

At a very basic level, the generation of public goods requires cooperation. Why is it then that some cities find it more difficult to cooperate than others? Scholars have identified racial/ethnic diversity and changes in diversity as prime suspects in determining under-provision of public goods (e.g. Alesina et al. 1999, Hopkin 2009). Nonetheless, diversity alone does not generate a lack of cooperation in city politics. It is only when cities are also segregated along racial lines that we see lower public goods provision. Segregated places are politically-polarized places. The gulf between whites and minorities in segregated places makes it less likely that

they will find common ground in support of a bundle of taxation and expenditures, driving down collective investment. It is segregation, not diversity that contributes to inequality.

I provide evidence for this argument using election data from 25 large cities between 1990 and 2010 and demographic data matched to city finance data from 1982 to 2012 in more than 3,000 cities. To handle the problem of endogeneity in the finance analysis, I instrument for segregation using the number of waterways in a city. I find that segregated municipalities spend less on a wide range of public goods. This lower spending has consequences. In the final section of the chapter, I find that racially segregated cities also have more sewer overflows per capita.

I focus here (and in the next chapter) on racial segregation alone. A series of tests revealed that renter and wealth division do not produce similar results. These findings are bolstered by the historical evidence which indicates that it is race and not class division that generates the starkest conflicts in city politics. Throughout, I control for indicators of wealth and homeownership to ensure that the results are not conflating race and class.

Literature and Hypotheses

Local politics, more so than national or state politics, concerns battles over space. This is because local governments control the location of negative and positive externalities (like pollution-producing factories or public parks) and also because many of the functions that local governments provide are allocational in nature (e.g. where police officers will be deployed and which roads will be repaved). One of the few powers that is reserved nearly exclusively by local government is that of zoning or planning. As a result, geographic areas within cities (e.g. neighborhoods) are frequently important actors in municipal politics.

At the same time, neighborhoods in America remain highly segregated along racial lines (see Chapter 1). Although neighborhood racial segregation has lessened in recent decades, today, the typical white American lives in a neighborhood that is overwhelmingly white, while Black, Latino, and Asian Americans live in substantially more integrated places (Logan and Stults 2011).[109] These patterns have created stark divides between white and nonwhite communities (Enos 2011). When a city is residentially segregated by race, issues cleave along racial and not just spatial lines (Massey and Denton 1993).

Furthermore, in segregated cities, divisions across racial groups are likely to be exacerbated because the political priorities and opinions of racial groups are likely to be more divergent than they are in integrated places. Neighborhood racial isolation is associated with a high degree of racial intolerance, resentment, and competition among all racial groups (Oliver 2010, Chapter 7). This correlation is due to both self-selection and interpersonal interactions (Rodden 2010). When deciding where to live, people with racially intolerant attitudes often seek same race neighbors (Charles 2003, Boustan 2012) either because they want to minimize contact with other race individuals (Massey and Denton 1993) or because they associate other race neighborhoods with poor neighborhood quality on dimensions such as schools, crime, and property values (Helper 1969, Ellen 2000, Bayer, Ferreira, and McMillian 2007, Krysan et al. 2008). However, living in different types of neighborhoods may also change individuals' perspectives. In integrated neighborhoods, regular, casual interaction may work to counteract dominant, negative stereotypes (Allport 1954, Oliver and Wong 2003). The result of both population sorting and/or neighbors' influence is that individuals who live in homogeneous

[109] African Americans, Latinos, and Asians live in neighborhoods that are comprised of 22%-46% of their own group.

neighborhoods are more likely to harbor negative stereotypes about other groups (Oliver 2010, Oliver and Wong 2003).

Yet, at higher levels of geography (e.g. in cities, counties, and metropolitan areas) it is integration or diversity that correlates with intolerance, prejudicial attitudes, increased racial tension, less cooperative behavior, and lower spending on public goods (Key 1949, Glaser 1994, Branton and Jones 2005, Taylor 1998, Campbell et al. 2006, Alesina et al. 1999, Vigdor 2004, Hopkins 2009, Poterba 1997). As a result, racial competition, racial resentment, and racial conservatism are positively correlated with homogeneity at the neighborhood level, but negatively correlated with homogeneity at the city level (see Oliver 2010 for a detailed account of these conflicting patterns).[110] A severely segregated city is one that is diverse overall and has many homogeneous neighborhoods – both characteristics which point towards a high degree of racial conflict.

This higher degree of racial conflict in segregated cities has obvious political implications. Levine (2014) has found that racial segregation is strongly predictive of partisan political divisions in metropolitan areas and that these political divides result in an unwillingness to cooperate on metropolitan-wide policy solutions. We can expect a similar pattern at the city level. First, in segregated cities, racial groups should be more divided with respect to political priorities. Second, diverse but divided cities may be less able to come to a consensus about the production of basic government services, and thus, will be less supportive of public goods provision. This second hypothesis speaks directly to the claim that diversity drives down

[110] There are a few exceptions to this pattern. A handful of scholars have *not* found that diversity increases tolerance at the neighborhood level. Gay (2006) and Oliver and Mendelberg (2000) find no relationship between neighborhood racial context and racial attitudes. Enos (2016) shows that that homogeneity decreases voter turnout among whites and also decreases support for conservative candidates. Cho, Gimpel and Dyck 2006 find that homogeneity decreases turnout among Asian Americans in some cases, but increases it (or has no effect) in others. Leighly and Vedlitz (1999) find that homogeneity correlates positively with turnout for whites.

collective investment (Alesina et al. 1999). As Benoy Jacob (2013) has persuasively argued, not all diversity is equivalent. When whites and nonwhites live in the same city, the pattern of residential integration ought to factor into expectations about public goods expenditures. White and nonwhites may live as next door neighbors, but they also may not. If segregation represents preferences or attitudes that are incompatible with collective investment, then uneven distribution of groups, not diversity per se, ought to correlate with lower public goods spending.

Segregation and Political Polarization

In municipal politics, vote patterns and policy priorities are shaped by racial cleavages more so than *any* other demographic division (Hajnal and Trounstine 2013a, Hajnal and Trounstine 2013b, Hajnal and Trounstine 2014). While ideology, partisanship, and class all play important roles in determining vote choice and support for municipal administrations, conflicts among racial groups are predominant. If segregated cities are more politically polarized, these racial divides should be most pronounced in places with a high degree of residential segregation. To determine whether or not this is the case, I analyze the relationship between residential segregation patterns and racial divisions in mayoral elections in the nation's largest cities between 1990 and 2010.

To estimate the effect of segregation on racial polarization, I use a dataset compiled by Hajnal and Trounstine (2014) that measures support for winning mayoral candidates across different racial groups in primary and general elections in large cities. The data include 91 separate contests from 25 cities. Vote by race data were compiled from a combination of exit polls, pre-election surveys, homogenous precinct analyses, and ecological inference.[111]

[111] These data are described completely in Hajnal and Trounstine (2014).

Summary statistics and a list of cities included in the analysis are provided in appendix Tables A6.1 and A6.2.

For each election, I calculated the difference in support for the winning candidate between black and white voters, Latino and white voters, and black and Latino voters. The dependent variable in this analysis is the absolute value of the largest difference in support for the winning candidate between any two racial groups. For instance, in Philadelphia in 2003, exit polls reported that 24% of white voters supported the winner, John Street, compared to 88% of black voters, and 47% of Latino voters. In this election the black-white divide was 0.64, the Latino-white divide was 0.23, and the black-Latino divide was 0.41. Therefore, the dependent variable takes the value of the black-white divide, 0.64. In 62 of the 91 contests, the largest divide was between black and white voters, in 13 contests it was the divide between Latino and white voters, and in 16 contests the largest divide was between black and Latino voters.[112] The distribution of racial divides across cases is listed in appendix Table A6.2.

As described in Chapter 1, my primary independent variable is a measure of segregation called Theil's *H* Index. The *H* Index measures the degree to which the diversity in each neighborhood differs from the diversity of the city as a whole, expressed as a fraction of the city's total diversity and weighted by the neighborhood's share of the total population.

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents the total population of neighborhood *n* or city *c* and E is the entropy of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city, and 1 where all neighborhoods contain only one group.

[112] As an alternate measure of division, I took the difference in support between white voters and the average of support among black and Latino voters. The results are extremely similar.

I calculated the *H* Index for all United States cities using Census-tract level demographic data from the 1980, 1990, and 2000 Censuses of Population and Housing and from the 2011 American Community Survey.[113] To start, I use four groups in the calculation of entropy: white (non-Hispanic), black (non-Hispanic), other (non-Hispanic), and Hispanic/Latino.[114] I then combine Blacks, Hispanics, and Other races into a single nonwhite group for comparison. For reference, the mean *H* Indices for each city in the analysis are shown in appendix Table A6.2.

I include a number of control variables in addition to the *H* Index. One of the primary arguments in the literature is that racially and ethnically diverse populations will have heterogeneous political preferences which then drives low spending on public goods. If this is the case, we should see more racial polarization in the vote as diversity rises. Thus, I include the proportion of *Blacks*, *Latinos*, and *Asian Americans* in the city and a measure of *Diversity* known as the Herfindahl Index[115]:

$$Diversity = 1 - \sum_{r=1}^{R} \pi_r^2$$

I also include control variables that are shown by Hajnal and Trounstine (2014) to affect racial polarization in voting and which may also be correlated with segregation. I account for the *Median Household Income*, proportion of the population *Renting* their homes, proportion of the population with a *College Degree*, the race of the candidates in the election (a dummy variable coded 1 if the election featured *Biracial* candidates), a measure noting whether or not the

[113] Tract-level data for 1980, 1990, and 2000 come from a proprietary product developed by GeoLytics called the Neighborhood Change Database (NCDB), which matches and normalizes Census tracts over time. The data from the 2011 American Community Survey (ACS) are available for download through the Census ftp server located at http://www2.census.gov/.

[114] The 1980 tract-level data only disaggregate the non-Hispanic population into Whites, Blacks, and Others, so I am unable to include Asians as a separate group.

[115] This calculation includes five racial groups: white (non-Hispanic), black (non-Hispanic), Asian (non-Hispanic), Hispanic, and other.

election was *Non-partisan*, an indicator for *Primary* elections, and the size of the total *Population* (logged). Finally, I include fixed effects for year and region and random effects for cities.

In Model 3, I also add a measure of the average *Ideology* among the city's white residents to determine whether or not segregation is merely a proxy for a conservative white population. This measure was constructed using General Social Survey (GSS) data from 1998, 2000, 2002, 2004, 2006, and 2008. Using restricted access data, I geo-coded each respondent in the GSS to his/her city of residence. I then took the mean ideology score for each city's white respondents for each year (higher values indicate more conservative respondents).[116] I interpolated ideology for odd years and then merged these data to the racial polarization data set. In order to preserve as many observations as possible, I matched GSS data from the most recent year for each election.

The results presented in Table 6.1 offer strong support for the hypothesis that more segregated cities are also more politically polarized.

[116] I dropped city/years from the GSS that only contained a single respondent.

Table 6.1: Racial Polarization in Segregated Cities

	Racial Divide w/ Multi-Group Segregation Index			Racial Divide w/ Two-Group Segregation Index			Racial Divide w/ Ideology control		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Multi-group H Index	0.932	0.39	0.02						
White/nonwhite H Index				0.756	0.30	0.01	0.835	0.30	0.01
Diversity	0.385	0.36	0.29	0.518	0.32	0.11	0.584	0.32	0.07
% Asian	-0.115	0.53	0.83	0.120	0.56	0.83	-0.004	0.52	0.99
% Black	-0.432	0.27	0.11	-0.237	0.22	0.27	-0.133	0.21	0.53
% Latino	-0.191	0.26	0.46	-0.059	0.25	0.82	0.095	0.28	0.73
Median HH Income (1000s)	-0.004	0.00	0.52	-0.007	0.00	0.32	-0.002	0.00	0.81
% Renters	-0.580	0.42	0.17	-0.806	0.43	0.06	-0.419	0.45	0.36
% College Educated	0.328	0.71	0.65	0.723	0.73	0.32	0.123	0.87	0.89
Biracial contest	0.210	0.04	0.00	0.208	0.04	0.00	0.192	0.04	0.00
Nonpartisan Election	-0.090	0.07	0.18	-0.089	0.07	0.18	-0.034	0.06	0.60
Primary Election	-0.092	0.03	0.00	-0.09	0.03	0.01	-0.071	0.03	0.02
Population (logged)	0.035	0.06	0.53	0.048	0.05	0.38	-0.011	0.06	0.86
White Ideology							-0.051	0.03	0.11
Constant	-0.242	0.57	0.67	-0.393	0.56	0.49	0.236	0.61	0.70
Wald χ^2	187.12		0.00	189.68		0.00	222.92		0.00
N	91			91			86		

Note: Multi-level mixed-effects linear regressions with fixed effects for region and year, and random effects for cities.

The relationship between segregation and political polarization is powerful. A city in the 10th percentile of the segregation distribution can be expected to have a 35 percentage point divide between different racial groups' support for the winning candidate, while a city in the 90th percentile of segregation has a predicted racial divide of 63 percentage points.[117] These results hold even with the inclusion of racial demographics. Segregation, not just diversity, matters for polarization. The data also indicate (comparing columns 1 and 2) that there is no significant difference in accounting for segregation among multiple racial groups as opposed to accounting

[117] Estimates were generated from the regression presented in column 1 with all other variables held at their mean values. Predicted effects were generated using the "margin" command in Stata 12.

for segregation of whites from nonwhites.[118] This makes sense given that whites are much more likely to live in homogenous neighborhoods than are other racial and ethnic groups and given that the most pronounced political division is typically between whites and one or more minority groups, rather than among minority groups. These results suggest that political polarization depends on the degree to which *white* residents live in exclusively white neighborhoods.

I have argued that segregation generates political divisions because the politics of space become intertwined with race. It is possible though, that segregation is simply correlated with a more ideologically conservative white population which then generates divides in support for candidates. As the third column reveals, the relationship between segregation and polarization appears to be unaffected by the conservatism of the white population. In fact, the relationship between ideology and polarization is such that cities with more conservative white populations have smaller racial divides, underscoring the conclusion that racial polarization is not driven by ideological divisions. In the next section, I ask whether or not this polarization extends beyond support for candidates to a lack of consensus over policy. In short, I find that it does.

Diversity and Segregation in the Aggregate

Scholars have provided evidence that racially diverse places and those that are becoming increasingly diverse spend fewer public dollars on productive public goods (Alesina et al. 1999, Hopkins 2009). I have argued that segregation, not just diversity, should matter in municipal politics. In the first section of this chapter, I showed that segregation is related to political polarization, even after accounting for racial demographics. If it is the case that segregated populations are less able to come to a consensus over citywide policy decisions, we should also

[118] The 95% confidence intervals for these coefficients are nearly completely overlapping. Additionally, adding both coefficients to the same equation and running a post-estimation Wald test of equality indicates no significant difference.

see less support for government spending in segregated cities after accounting for racial demographics.

In order to analyze this hypothesis, I draw on the Census of Governments city and township expenditure data from 1982, 1987, 1992, 1997, 2002, 2007, and 2012.[119] To these data, I merged interpolated data from the 1980, 1990, 2000, and 2010 Census of Population and Housing, and from the 2007-2011 American Community Survey (ACS). In the broadest sample, I have data for 3,113 cities, which range in size from about 750 residents to more than 8 million.[120] To capture overall spending on public goods, I analyze the effect of segregation on per-capita *Direct General Expenditures.*[121] I follow this with analyses of operations expenditures on specific budgetary categories including *Roads and Highways, Police, Parks, Sewers*, and a combined category of *Welfare, Health, and Housing and Community Development.*[122] I also analyze per capita *Revenues* coming from the city's own residents (as opposed to intergovernmental revenues) as an indication of the burden of funding the populous is willing to bear.[123] All spending data are in thousands of 2012 dollars. Summary statistics are shown in appendix Table A6.3. As above, the primary independent variable is the *H* Index to measure segregation. In the tables and figures below, I present results using the two-group (white and nonwhite) index; results from the multi-group index and isolation index are very similar.

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119 Available at http://www2.census.gov/pub/outgoing/govs/special60/. Filename is "_IndFin_1967-2012.zip".
120 Data are available for many more cities in 2012 than in prior years (largely because I have Census data for more places in 2011). I only use observations from 2012 that are also included in 2007 to create a consistent panel.
121 All analyses are restricted to cities with non-zero expenditures in the category in question because the data do not distinguish between zero expenditures and missing data.
122 Operations expenditure totals were generated by taking the total spending in each category less any capital expenditures in that particular year. The category of welfare, health, and housing/community development represents the primary expenditures by cities used to directly support people in economic need.
123 In contrast, the categorical expenditure variables include all spending on a certain target regardless of the source of the funds.

To account for the alternative explanation that diversity drives down spending, the analyses include the proportion of the population that is *Black*, *Asian*, and *Latino* as well as a measure of overall *Diversity*. Controlling for demographics also helps account for the fact that white and minority preferences for government spending differ. Racial and ethnic minorities support more government spending than whites on a large number of programs at all levels of government (Hutchings and Valentino 2004). In the aggregate then, we might expect cities with larger populations of racial and ethnic minorities to support more per capita expenditure, just as Boustan et al. (2013) find. But if my theory is right, cities with more segregation and similar shares of minority residents ought to witness smaller budgets and lower spending on public goods compared to cities with less segregation because the likelihood of cooperation ought to be fundamentally different in these types of places.

The analyses below also control for the total *Population* (logged), the proportion of the population *Over Age 65*, the proportion of the population with a *College Degree*, the proportion of each 100 residents *Employed as Local Government* workers, the proportion of households that *Rent* their home, and the *Median Household Income*. These controls are meant to capture demographic dimensions that affect both segregation and expenditures (through both preferences and need). For instance, we might expect cities with large populations of government workers to have higher levels of spending, while the reverse might be the case in cities with older populations. An important alternative explanation for a negative relationship between segregation and spending could be city wealth. Segregated cities might be poorer cities for some reason, and may simply have fewer resources to spend on public goods. Controlling for the proportion of the city that rents and the median household income are intended to account for

this possibility.[124] Finally, I include fixed effects for cities. This allows me to analyze the effect of segregation within the same location over time and controls for the many factors (such as age of the city, differentials in costs for service provision, taxation powers and limits, etc.) that might lead cities to differ in expenditure patterns cross-sectionally. I cluster standard errors by city. I exclude from the analyses cities with only a single Census tract because the measure of evenness is constant (by definition).

I begin, in Table 6.2, by regressing per capita *Direct General Expenditure* on *Segregation* with the controls described above. Then, in the second column, I replace *Diversity* with *5 Year Changes* in racial group shares (following Hopkins 2009) to determine whether or not changes in diversity could be the driving factor.[125] In the third column, I add the mean *Ideology* of city residents (calculated from the GSS for all city residents as described above) to account for the possibility that segregated cities are more ideologically conservative. In alternate models (not shown), I add a control for renter segregation. The coefficient is insignificant and does not affect the results presented below.

[124] In alternative analyses I tested the inclusion of proportion of the city in poverty and median home values with no change to the pattern of results.
[125] Hopkins (2009) uses 10 year changes in racial group shares. I chose 5 years in order to preserve more observations in the time-series. The results are similar with 10 year changes.

Table 6.2: Effect of Segregation on Overall Per Capita City Expenditures

	Direct General Expenditure Per Capita			Direct General Exp w/ changing demographics			Direct General Exp w/ ideology control		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Segregation	-1.266	0.218	0.000	-1.141	0.231	0.000	-1.731	0.45	0.000
Diversity	0.199	0.133	0.134				0.060	0.257	0.816
% Black	0.726	0.179	0.000	0.854	0.168	0.000	0.117	0.641	0.856
% Asian	-0.88	0.288	0.002	-1.212	0.307	0.000	-0.565	0.74	0.445
% Latino	1.634	0.171	0.000	1.721	0.19	0.000	1.560	0.394	0.000
5 yr Δ % Black				-1.918	0.691	0.006			
5 yr Δ % Latino				-1.695	0.725	0.02			
5 yr Δ % Asian				-1.389	1.073	0.196			
Median Income (1000s)	0.006	0.001	0.000	0.005	0.002	0.001	0.009	0.003	0.001
% Local Gov. Employees	-0.004	0.015	0.787	-0.007	0.017	0.683	-0.077	0.051	0.132
% Renters	0.387	0.318	0.223	0.181	0.311	0.560	-0.123	0.693	0.860
% Over 65	0.458	0.597	0.443	0.639	0.453	0.158	-1.139	0.887	0.200
% College Grad	5.114	0.434	0.000	5.806	0.433	0.000	6.66	1.23	0.000
Population (logged)	-0.36	0.045	0.000	-0.439	0.07	0.000	-0.551	0.097	0.000
City ideology							-0.001	0.037	0.972
Constant	3.379	0.441	0.000	4.268	0.675	0.000	6.358	1.317	0.000
N	16,831			14,284			2,524		
Number of Cities	3,113			3,113			395		

Note: Linear regressions with fixed effects for cities, robust standard errors clustered by city presented.

Table 6.2 provides strong evidence that segregation and public goods spending are negatively related, even in the presence of changing demographics, diverse populations, and conservative residents. The effects of segregation are substantively meaningful and statistically significant. Increasing the segregation index from the 25th to 75th percentile (from .01 to .10) in the base model lowers per capita direct general expenditure from $1,413 to $1,299. A difference in total spending of more than $100 per resident could dramatically affect the quality of public goods that individuals experience given that the average per capita operating expenditure on police is about $190 and about $51 on parks. In Table 6.3, I show that the depressive effect of segregation extends to individual categories of public goods spending as well.

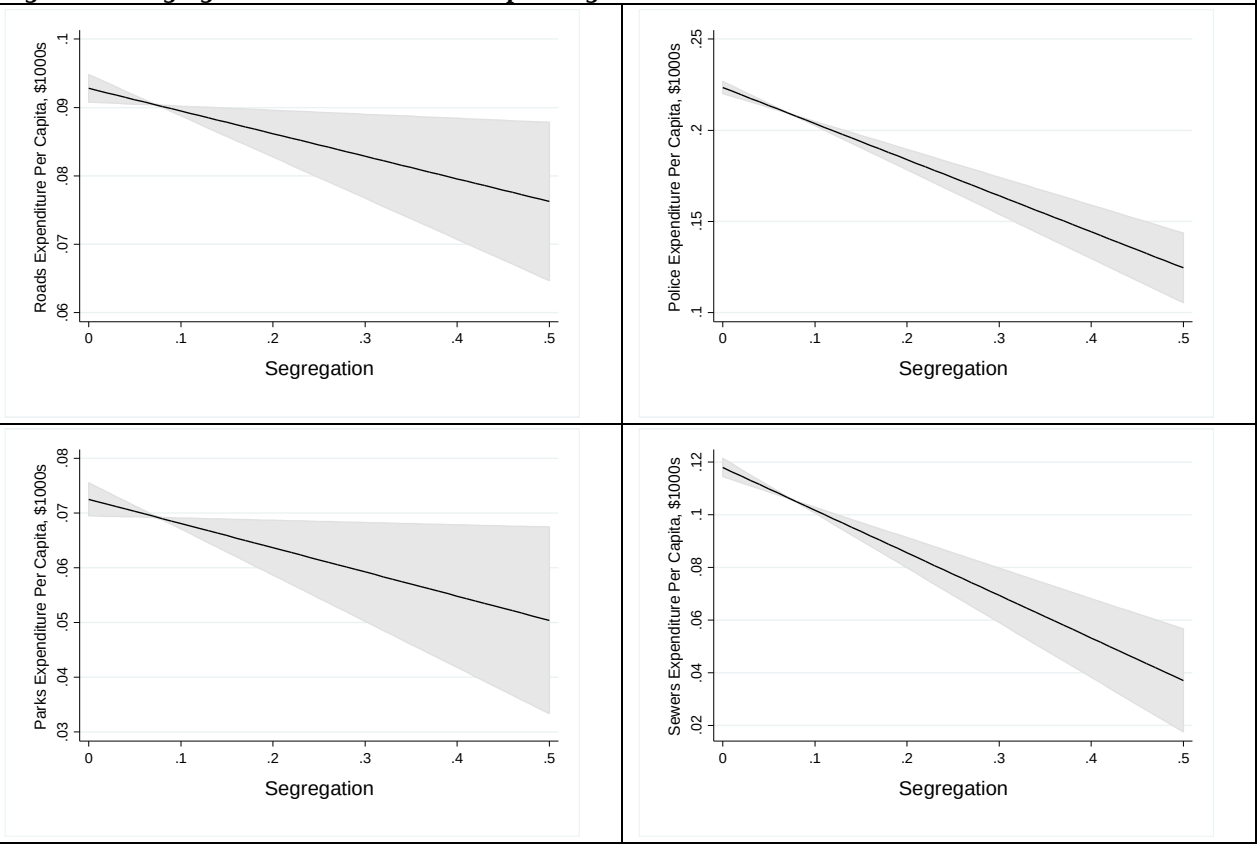
Table 6.3: Effect of Segregation on Public Goods

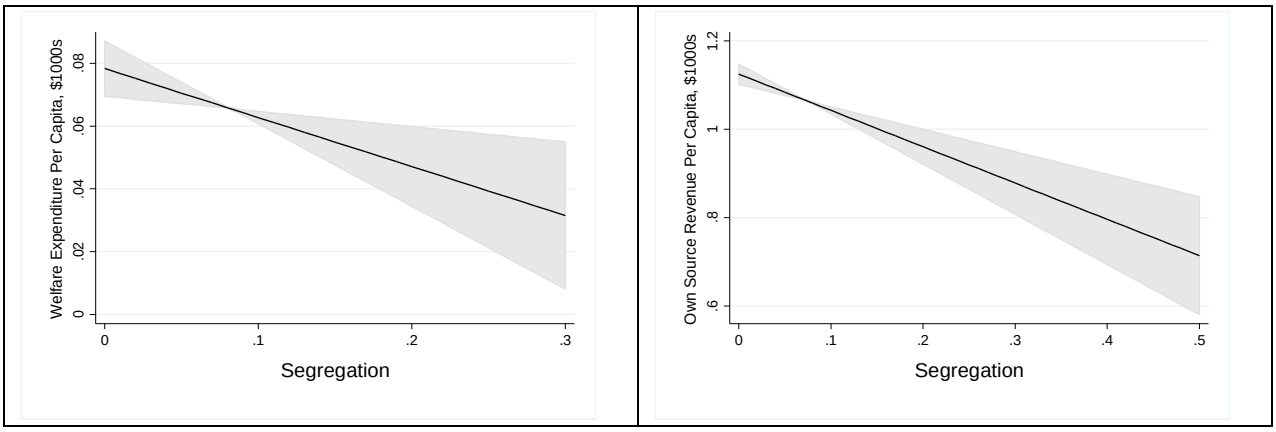
	Roads			Law Enforcement			Parks			Sewers			Housing/Welfare			Own Source Rev		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	B	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t||
Segregation	-0.033	0.01	0.02	-0.198	0.02	0.00	-0.044	0.02	0.03	-0.162	0.02	0.00	-0.156	0.05	0.00	-0.822	0.16	0.00
Diversity	0.017	0.01	0.06	0.060	0.01	0.00	0.012	0.01	0.25	0.041	0.01	0.00	-0.023	0.02	0.35	0.136	0.09	0.13
% Black	0.039	0.01	0.00	0.167	0.02	0.00	0.024	0.02	0.13	0.005	0.02	0.78	-0.013	0.07	0.86	0.321	0.13	0.01
% Asian	-0.069	0.02	0.00	-0.083	0.03	0.02	-0.069	0.03	0.01	-0.155	0.04	0.00	0.084	0.07	0.26	-0.508	0.23	0.02
% Latino	0.018	0.01	0.12	0.361	0.02	0.00	0.031	0.01	0.01	0.088	0.02	0.00	0.144	0.03	0.00	1.303	0.12	0.00
Median Income (1000s)	0.000	0.00	0.00	0.000	0.00	0.11	0.000	0.00	0.01	0.000	0.00	0.00	0.00	0.00	0.57	0.006	0.00	0.00
% Local Gov. Employees	0.000	0.00	0.81	-0.001	0.00	0.52	0.001	0.00	0.38	-0.002	0.00	0.28	-0.009	0.00	0.01	-0.006	0.01	0.64
% Renters	0.030	0.02	0.11	0.085	0.03	0.00	0.026	0.02	0.22	0.188	0.03	0.00	0.075	0.05	0.11	0.501	0.26	0.05
% Over 65	0.149	0.03	0.00	0.191	0.05	0.00	0.174	0.04	0.00	0.076	0.06	0.17	-0.081	0.08	0.29	0.648	0.47	0.17
% College Grad	0.189	0.02	0.00	0.842	0.04	0.00	0.399	0.04	0.00	0.382	0.04	0.00	0.447	0.09	0.00	4.452	0.37	0.00
Population (logged)	-0.020	0.00	0.00	-0.06	0.00	0.00	-0.006	0.00	0.02	-0.027	0.00	0.00	-0.024	0.01	0.00	-0.229	0.03	0.00
Constant	0.197	0.03	0.00	0.548	0.05	0.00	0.006	0.03	0.85	0.215	0.04	0.00	0.262	0.09	0.00	1.894	0.33	0.00
N	16,642			16,673			15,809			13,832			13,203			16,830		
Number of Cities	3,089			3,083			3,020			2,840			2,754			3,113		

Note: Linear regressions with fixed effects for cities, robust standard errors clustered by city presented.

Clearly, spending on public goods is lower in cities with greater segregation. Across all six categories displayed in Table 6.3, segregation exerts a significant negative effect. Figure 6.1 presents these results graphically.

Figure 6.1: Segregation and Public Goods Spending





Note: Figures show the predicted relationship between Theil's H segregation index and per capita spending on public goods in constant 2012 dollars. Gray shading represents 95% confidence intervals.

Tables 6.2 and 6.3 also reveal that while segregation is negatively related to public goods investment, more diverse communities are mostly associated with higher levels of spending as the positive coefficients on diversity and on percent black and Latino indicate. Given that racial and ethnic minorities are both more supportive of public goods spending and more likely to live in segregated places (which see less support for public goods), it is important to ask what the overall impact of these countervailing effects is. Table 6.4 shows how segregation affects public goods provision across the range of values of diversity. I divide the sample of cities into quintiles of percent nonwhite (with 3,366 city-years in each quintile) and then, after estimating the model displayed in column 1 of Table 6.2, I predict Direct General Expenditure per capita at the minimum and maximum values of segregation for each quintile, holding all other variables at their mean values given the quintile. Table 6.4 shows the difference in these predicted values for each quintile of percent nonwhite.

Table 6.4: Change in Direct General Expenditure Per Capita by % Nonwhite at Minimum and Maximum Levels of Segregation

Quintile of % Nonwhite	Average % Nonwhite	Average Segregation Level	Change in Predicted Direct General Expenditure Per Capita*	95% Confidence Interval
1	4%	0.030	-$490	(-$656, -$325)
2	10%	0.041	-$870	(-$1163, -$576)
3	19%	0.066	-$970	(-$1298, -$643)
4	33%	0.108	-$930	(-$1244, -$616)
5	65%	0.125	-$846	(-$1132, -$561)

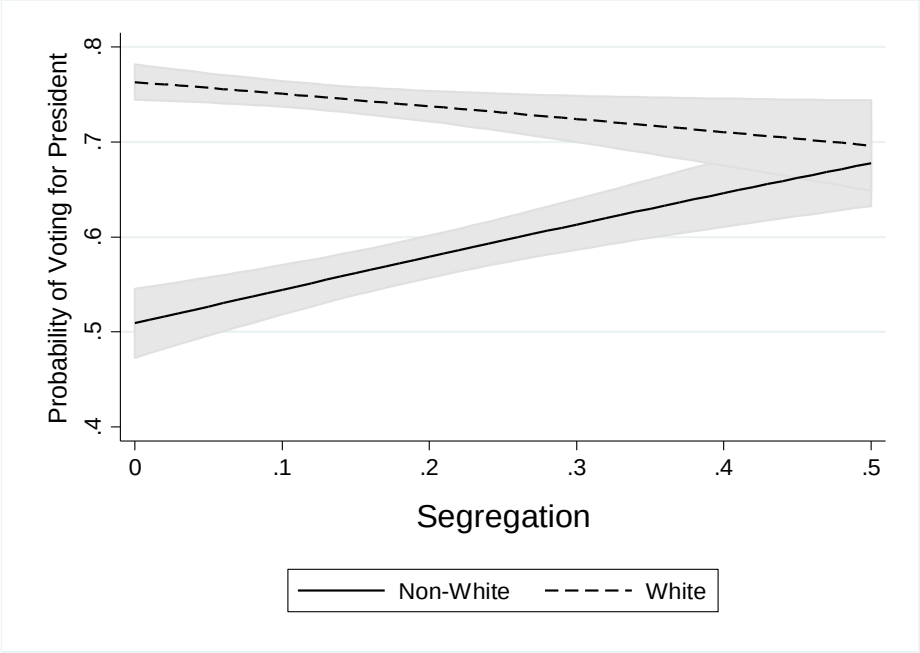
*Predicted values generated from regression displayed in column 1, Table 7.2. Change is from the minimum to maximum level of segregation within a quintile of percent nonwhite.

Table 6.4 reveals substantial declines in direct general expenditure as segregation increases, regardless of the size of the minority population. Segregation has the largest effect in cities with moderately sized minority populations (where minorities comprise 19-33% of the population), but even in majority-minority cities (where minorities make up more than 50% of the population) and cities that are overwhelmingly white, increasing segregation decreases investment in public spending. The fact that segregation has the most pronounced effect in the middle quintiles offers indirect evidence that it is white residents responding to significant minority concentrations driving the negative relationship between segregation and public goods spending. An alternative possibility is that low turnout among minority residents drives this pattern. As Figure 6.2 shows, this case is extremely unlikely, given that turnout among minority residents is actually higher in more segregated cities while turnout among whites is lower.

To test this possibility, I draw on data from the General Social Surveys conducted between 1998 and 2008; years for which I was able to determine respondents' city of residence

(see Chapter 7 for additional details on this dataset). I estimate the probability that a respondent *Voted* in the most recent presidential election. Using logistic regression, I regress this variable on the level of *Segregation* in the respondent's city. To understand how segregation operates differently for different groups, I interact the level of segregation with a dummy variable coded 1 if the respondent is *White and Non-Hispanic*, and 0 otherwise. I control for the respondent's level of *Education*, whether or not they have *Kids at home*, their *Gender*, whether or not they are *Married*, their *Income*, and whether or not they are a *Government Employee*.

Figure 6.2: Correlation between Segregation and Turnout by Race



At low levels of segregation, white turnout is much higher than minority turnout, but the lines converge as segregation increases. Furthermore, using the racial polarization dataset described in the first section of this chapter, I find that turnout and segregation are positively

correlated in the aggregate. These patterns strongly suggest that politics is more contentious in more segregated communities. Thus, a lack of participation by residents who support high spending is not likely to be the cause of lower public goods investment.

However, even with controls, one might still worry about the causal relationship between segregation and spending. I have argued that segregation should suppress public goods spending. However, it is entirely possible, perhaps quite likely, that some unmeasured set of factors affect both spending and segregation (or that the reverse is true, and spending levels affect segregation patterns). Since we cannot randomly assign segregation to determine its effect on city spending, I use an instrumental variable approach to study the relationships.

A great many factors affect residential location and the distribution of different types of residents across neighborhoods. One set of factors that affects both property values and the ability for communities to maintain a preferred degree of homogeneity are natural and manmade barriers. For instance, freeways and railroad tracks frequently divide more desirable and less desirable parts of town (Ananat 2011). But railways and freeways are often built with the intent to segregate racial communities (Bayor 1996). Instead, I focus on waterways (including large streams and rivers), which vary in number across cities and are arguably exogenous to segregation and spending given that they are not man-made. The use of waterways as an instrumental variable was introduced by Hoxby (2000) who used streams to estimate the governmental fragmentation of metropolitan areas. Cutler and Glaeser (1997) rely on Hoxby's waterways data as an instrument for metropolitan area racial segregation. My instrument differs in two ways. First, and most importantly, my data capture waterway counts and segregation patterns at the *city* level rather than at the metropolitan-area level. Secondly, I use a different source file for the waterways data and a different method for determining whether a waterway

ought to be counted within the boundaries of a community.[126] In order to use waterways as an instrument for segregation, I gathered the "rivers and streams" geographic information system map file from the National Hydrologic Remote Sensing Center which is part of the National Oceanic and Atmospheric Administration (an agency in the US Department of Commerce).[127] I added Census TIGER Line boundary files for all places in the United States as of 2000.[128] I then generated counts of waterways for each place and added these counts to the finance data described previously. Overall, the correlation between the number of waterways and the H Index is a powerful 0.37, and the F-statistic on the excluded instrument is 3,999, which is considerably higher than the typical target of 10.[129]

The current analyses use the same dependent variables as were presented in Tables 6.2 and 6.3 (per capita spending on various public goods). The number of waterways is used as an instrument for the *H* Index. Waterways are also correlated with other characteristics that are important to both segregation and spending patterns. The most important of these characteristics is the size of the population which is correlated with both the number of waterways and the level of segregation. People have settled near waterways since antiquity, and larger cities are also much more likely to be segregated than smaller cities (perhaps because there are more neighborhoods from which to choose). To account for this, I include logged population

[126] Hoxby (2000) uses a hand count of streams that are 3.5 miles in length and "of a certain width" supplemented with data from the Geographic Names Information System which lists the latitude and longitude of smaller streams. Instead, I use geographic information system maps as described in the main text and include all large streams and rivers regardless of length and width. Hoxby (2000) attributes a stream to a Metropolitan Statistical Area (MSA) if it terminates in the MSA (Rothstein 2007), whereas my analysis attributes a waterway to a community if it flows through the community at all (not just at its origin or destination).

[127] The "rivers and streams" shape file is available at: http://www.nohrsc.noaa.gov/gisdatasets/. It was most recently updated in 2008.

[128] Boundary files are available for download by state here: http://www2.census.gov/geo/tiger/TIGER2010/PLACE/2000/

[129] This F-statistic is drawn from a simple two-stage regression instrumenting segregation with waterways and including no additional controls.

as an instrument in the first stage.[130] In both the first and second stage regressions, I include the same control variables as presented in Table 6.2, with two changes. Because the number of waterways is constant in my dataset, I do not add fixed effects at the city level.[131] Instead, I include fixed effects for region and year. Secondly, I add a lagged version of the dependent variable to account for the high correlation between observations over time for the same city and the fact that local budgets are typically changed incrementally from prior years. The results from this instrumental variable approach are displayed in Table 6.5. For presentation purposes, the first stage results are relegated to appendix Table A6.4.

[130] In alternative specifications, I use the number of waterways per capita as the instrument. The pattern of the results is exactly the same.
[131] The omission of fixed effects allows for the inclusion of all cities regardless of the number of Census tracts.

Table 6.5: Effect of Segregation on City Expenditures, Instrumental Approach												
	Direct General Exp			Roads			Law Enforcement			Parks		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Segregation instrumented	-3.806	1.09	0.00	-0.385	0.05	0.00	-0.353	0.10	0.00	-0.025	0.02	0.18
Lagged DV	0.858	0.00	0.00	0.490	0.00	0.00	0.966	0.00	0.00	0.822	0.00	0.00
Diversity	-0.418	0.38	0.27	-0.027	0.02	0.15	-0.001	0.04	0.97	0.004	0.01	0.57
% Black	0.798	0.36	0.03	0.080	0.02	0.00	0.080	0.03	0.02	0.000	0.01	0.98
% Asian	-0.848	0.99	0.39	-0.088	0.05	0.07	-0.082	0.09	0.38	-0.029	0.02	0.08
% Latino	1.121	0.31	0.00	0.086	0.02	0.00	0.078	0.03	0.01	0.007	0.01	0.18
Median Income (1000s)	0.012	0.00	0.00	0.001	0.00	0.00	0.001	0.00	0.00	0.000	0.00	0.00
% Local Gov. Employees	0.276	0.03	0.00	0.017	0.00	0.00	0.020	0.00	0.00	0.002	0.00	0.00
% Renters	2.627	0.39	0.00	0.159	0.02	0.00	0.159	0.04	0.00	0.033	0.01	0.00
% Over 65	2.260	0.81	0.01	0.270	0.04	0.00	0.233	0.08	0.00	0.089	0.01	0.00
% College Grad	-0.495	0.62	0.42	-0.013	0.03	0.68	-0.051	0.06	0.39	0.045	0.01	0.00
Constant	-2.034	0.31	0.00	-0.105	0.02	0.00	-0.149	0.03	0.00	-0.026	0.01	0.00
N	2,669			25,121			25,034			23,197		
	Sewers			Welfare			Own Source Revenue					
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|			
Segregation instrumented	-0.393	0.06	0.00	-0.194	0.06	0.00	-3.344	0.95	0.00			
Lagged DV	0.082	0.01	0.00	0.936	0.00	0.00	0.712	0.00	0.00			
Diversity	0.075	0.02	0.00	0.000	0.02	1.00	-0.373	0.33	0.26			
% Black	0.054	0.02	0.02	0.065	0.02	0.01	0.686	0.31	0.03			
% Asian	-0.229	0.06	0.00	-0.008	0.05	0.87	-0.909	0.86	0.29			
% Latino	-0.048	0.02	0.01	0.045	0.02	0.01	1.01	0.27	0.00			
Median Income (1000s)	0.000	0.00	0.89	0.000	0.00	0.57	0.013	0.00	0.00			
% Local Gov. Employees	0.000	0.00	0.88	0.007	0.00	0.00	0.294	0.03	0.00			
% Renters	0.082	0.02	0.00	0.090	0.02	0.00	2.573	0.34	0.00			
% Over 65	0.344	0.05	0.00	0.109	0.05	0.03	2.435	0.71	0.00			
% College Grad	0.057	0.04	0.11	0.009	0.04	0.81	-0.433	0.54	0.42			
Constant	0.007	0.02	0.69	-0.057	0.02	0.00	-2.025	0.27	0.00			
N	20,258			17,827			25,671					

Note: Two stage least squares regressions with fixed effects for regions and year (not shown); Instrumented: Two-group H Index of segregation; Excluded Instruments: # of Waterways, Population logged.

Regardless of the statistical approach used, segregation appears to have a powerful, depressive effect on public goods provision in cities. The pattern of results in Table 6.5 reflects the OLS regression findings presented in Table 6.2. After accounting for demographic differences, cities with more segregation tend to have smaller budgets, they tend to extract fewer resources from their residents, and spend less on roads, policing, parks, sewers, and support for the poor.

But perhaps lower spending is what residents prefer. After all, many elections have been won on platforms promising austerity and frugality. In the final section of this chapter, I explore what the consequences of low spending might be by analyzing a universally disliked event: sewer overflows.

Segregation and Sewer Overflows

The federal Environmental Protection Agency (EPA) monitors municipal sewer systems for overflow events. According to a 2004 EPA report to Congress, approximately 860 billion gallons of untreated wastewater were released into communities between 2001 and 2003 when sewer systems' capacities were exceeded. Any single overflow might occur for many reasons – excessive wet weather, pipe blockages, equipment failure, or insufficient capacity. However, generally, as Tessin (2009) explains:

> The performance of a sewer system is strongly related to capital fund-raising….Without adequate investment, excessive groundwater can enter sewers through cracked pipes and ingrown tree roots. Aging pipes can break and send sewage to the surface. Growing populations can cause wastewater flow to exceed the system's design capacity….For these reasons, local governments that do not invest enough capital typically experience more sewer overflows and other system failures…(p168).

Some federal and state grants are available for sewer system maintenance, but the vast majority of funding to reduce overflows comes from local sources (EPA 2004). According to

my data, the most segregated cities spend about $200 less per capita each year on their sewer systems. In the aggregate, this translates to an average of about $60,000 less per year spent on sewers (after controlling for all of the other demographic variables included in the regressions above). When city engineers plan, build, extend, and repair sewer systems, they take into account variables like population growth and average precipitation, as well as potential deviations from those estimates.

Analyses of effective or responsive governmental policy typically needs to take into account variation in constituent preferences. For instance, a community that spends very little on protection of open space or on recycling may be accurately representing the views of its residents. Sewer overflows are different. No one wants a river of fecal matter running down their street or flooding their basement. Thus, it seems reasonable to assume that more frequent overflows are, without qualification, worse than fewer overflows. That said, voters and sewer engineers may not agree on the level of resources needed to prevent overflows and therefore, raising funds for capital improvements may be challenging. If it is the case, as I have asserted above, that more segregated cities will have more trouble coming to political consensus about public goods provision, then we ought to expect more segregated cities to witness more sewer overflows – all else equal. In order to determine whether or not this is the case, I utilize data collected by the Environmental Protection Agency in 2004.

In this data collection, the EPA gathered information on overflows from 25 state environmental agencies between 2001 and 2003.[132] In total, the EPA reported about 35,000 different overflow events from several thousand sewer agencies. The EPA data do not include any geographic identifiers other than the name of the sewer agency, and so, I matched these

[132] The data were generously provided to me by Jeff Tessin who had secured the data from an EPA staff member for his PhD dissertation.

names to cities by hand. After dropping cases in which the sewer operator was not a municipal government (e.g. metropolitan water districts or county governments), and cases in which the EPA data provided insufficient detail to identify the municipality, I determined the location of 19,817 overflow events. I aggregated these events to the city level and was able to match these data to segregation measures and Census data for 1,417 cities.

The median number of overflows during this period was 2, while the mode was 1. A few cities with enormously high numbers of overflow events pull the mean to 50. For this reason, I take the natural log of the number of overflow events for each city and standardize it by the city's population. This *Logged Overflows Per 1000 Persons* measure serves as my dependent variable. My main independent variable is the city's *H* Index of racial segregation measured in 2000 if available and 2010 if not. I control for the natural log of the *Total Population* to account for the possibility that cities serving more people are likely to have more advanced engineering for their sewer systems by necessity. I add fixed effects for states for two reasons. The first is that the EPA data collection gathered statistics form state agencies which may have had different reporting standards. The second reason is to account for the different environmental, regulatory, and funding environments cities in different states face. In a second regression, I add controls for other city demographics. I add the share that *Rents* their homes to account for the possibility that homeowners may be more likely to act politically to prevent overflows. I include the share of the population that is *Urban* to capture the difficulties rural areas may face in providing sewer systems to a dispersed population. I include the share of the population that is *Black*, *Asian*, and *Latino* to determine whether or not diversity alone can account for poor performance. I add the city's *Median Household Income* and *Per Capita Subventions* to measure the city's capacity to

raise funds for sewer maintenance and expansion. The results of these OLS regressions with robust standard errors are shown in Table 6.6 (summary statistics are in appendix Table A6.5).

Table 6.6: Correlation Between Segregation and Sewer Overflows

	β	SE	P>|t|	β	SE	P>|t|
Segregation	2.166	0.53	0.00	2.398	0.78	0.00
Population (logged)	-0.347	0.05	0.00	-0.325	0.07	0.00
% Renters				-0.424	0.40	0.29
% Urban				-0.129	0.09	0.16
% Black				-0.524	0.37	0.16
% Asian				3.813	1.01	0.00
% Latino				-0.080	0.28	0.77
Median Income (1000s)				-0.001	0.00	0.66
Subventions Per Capita (1000s)				-0.031	0.01	0.00
Constant	3.678	0.53	0.00	3.554	0.59	0.00
N	1,417			1,417		
R^2	0.199			0.207		

Note: Linear regressions with fixed effects for states, robust standard errors presented.

The data reveal a significant correlation between segregation and sewer overflows. Living in a city with very little segregation, one can expect about 1.5 overflows per year on average. This increases to nearly 2.5 overflows in cities at the 95th percentile of the segregation distribution. Not only do segregated cities see lower spending on public goods, but they also witness worse performance as well.

Conclusion

The evidence presented here indicates that racial segregation plays a significant role in access to public goods. Segregated cities are comprised of homogeneous neighborhoods embedded in larger diverse communities. While African Americans, Latinos, and Asians are today, fairly likely to live as neighbors, whites remain in isolated enclaves. Because local governmental decisions often concern spatial allocation, neighborhoods are important municipal

actors in local politics. In more segregated places, neighborhood interests become overlaid with racial division. Segregated cities are more racially polarized in elections and may be less likely to generate policy consensus. The result is that cities with more segregation have smaller public goods budgets. Segregated cities raise fewer dollars from their residents and spend less money on roads, law enforcement, parks, sewers, welfare, housing, and community development. This low spending may have significant consequences. For example, segregated cities also see more sewer overflows.

Patterns of residential location reveal that white residents are more likely than people of color to live in cities with low levels of segregation. In my dataset, nearly 74% of nonwhite residents live in cities in the top quintile of the segregation distribution, compared to only 48% of whites. What this means is that compared to whites, nonwhites are much more likely to live in communities that struggle to generate adequate public goods for their residents. Not only are whites segregated from racial and ethnic minorities within cities, but they are also segregated from people of color across city lines. This fact means that access to public goods is segregated along racial lines as well. As the nation has become more diverse, it has also become more unequal. Segregation and public goods play important roles in linking these phenomena.

Chapter 7: The Local Roots of Modern Conservatism

Between the late 1940s and mid-1960s, fights over racial integration pervaded the politics of America's cities. Throughout the United States, residents battled over the integration of public schools, public transportation, pools, parks, golf courses, and of course – neighborhoods. In detailed case studies, historians have shown that white resistance to desegregation in urban centers across the country, gave rise to a new rhetoric that emphasized the protection of private property and homeowners' rights (Kruse 2005, Lassiter 2006, Self 2003, Sugrue 1996). These historical studies argue that the rise of conservatism and Republican allegiance associated with suburban America today was actually rooted in the conflictual racial politics of central cities. In this chapter, I provide evidence that these patterns were widespread. I show that battles over the control of public space and public goods in postwar urban America contributed to the transformation of the demographic landscape and affected public opinion. People who would come to live in segregated neighborhoods, either by choice, compulsion, or happenstance, developed political attitudes and loyalties that differed significantly from similarly situated residents in more integrated places.

First, I show that federal school desegregation orders generated increases in the number of segregated neighborhoods in metropolitan areas. In this analysis, I take advantage of the randomness desegregation order timing to substantiate the link. Then, I provide evidence that the relative whiteness of a neighborhood in 1970 is a powerful predictor of political attitudes and loyalties today. People who live in places that were whiter than their metropolitan area in 1970 were more likely to vote for the Republican presidential candidate in 2008 and are more conservative than their individual attributes (e.g. race, gender, marital status, age, education, income, presence of children) would otherwise predict. Conversely, those who live in places that

were more diverse in 1970 are more liberal today. However, even with a set of individual-level controls, it is difficult to convincingly estimate the effect of neighborhoods on public opinion. Some unmeasured characteristic might cause certain neighborhoods to be more or less diverse than the larger metropolitan area in 1970, and for individuals who live there to be more or less liberal. Given existing evidence that racial attitudes became a more important predictor of vote choice and public opinion during this same period (Carmines and Stimson 1989), it is important ensure that these relationships are being driven by the attributes of neighborhoods and not omitted individual-level variables. To do this, I instrument for the relative whiteness of neighborhoods using two geographic features: land elevation (controlling for waterfront areas) and distance from the nearest big city.

The consequences of segregation on individuals' life chances are well known; and as Thomas Sugrue (2015) writes, "the effects…are devastating."[133] Segregation increases inequality on many different socio-economic dimensions (Cutler and Glaeser 1997, Ananat 2011). The results presented here indicate that segregation also has powerful political consequences - increasing divisions in both public opinion and voting behavior.

Entanglements of Ideology and Integration

At the onset of the Second World War, the United States was already a very segregated nation. All large cities had clearly defined neighborhoods inhabited by people of color and others inhabited by whites – a pattern generated by both private choices and public policies (Massey and Denton 1988). [134] As a result of the economic collapse during the Great Depression

133 https://www.washingtonpost.com/opinions/its-not-dixies-fault/2015/07/17/7bf77a2e-2bd6-11e5-bd33-395c05608059_story.html

134 However, on the whole, the United States, both rural and urban, was still overwhelmingly white in 1940. About 10% of the population was black, about 1.7% of the population could be considered Hispanic/Latino, and about

and then material scarcity during the war, the nation faced a severe housing shortage during the 1940s. When increasing numbers of blacks moved from rural areas into cities and from the South to the North and West, the boundaries of existing black neighborhoods were pushed to their limits. In the Southwest, the Latino population also swelled with wartime employment.[135] These pressures resulted in explosive social and policy conflicts along racial lines. Because city governments had the power to zone, to permit development and locate nuisances, and thus to determine the value of property, these fights were central to city politics. As Self (2003) argues, "the effects of property [valuation] are far-reaching…They structure all kinds of interactions - from where one can buy a home to where politics is organized, from how police interact with neighborhoods to where children go to school. The struggle for the postwar city was over no less than the power to control and organize space…" (p18).

In response to postwar demographic changes, white homeowners sought to protect their neighborhoods (which they considered to be the reward for their hard work and frugality) from disruption and disorder. In the minds of many, pursuit of these goals required racial exclusivity. Sugrue (1996) reports that in Detroit, as elsewhere, "a majority of whites looked to increased segregation as the solution to [the] 'colored problem'" (p215). Whites, particularly those who owned their homes, believed that they had a right to certain neighborhoods and the public benefits (e.g. schools, safety) associated with those spaces. They understood minority demands for integration and court ordered desegregation plans as undermining this entitlement (Kruse 2005, p126). Whites justified exclusion with fiscal arguments; claiming that, "since Negroes are

0.1% Asian. http://www.latinamericanstudies.org/immigration/Hispanics-US-1850-1990.pdf; https://www.census.gov/population/www/documentation/twps0076/twps0076.pdf

[135] http://www-bcf.usc.edu/~philipje/Segregation/Haynes_Reports/Contours_PRR_2001-04e.pdf. Hundreds of thousands of Mexican descendants were deported during the Great Depression, so the overall Latino share of the population changed little.

so poor and pay virtually no taxes, they are actually not entitled to get more public services than the whites care to give them…" (Myrdal 1944, p336). When blacks *did* receive benefits, it was believed that whites unfairly bore the financial burden of their support. To illustrate this point, Kruse (2005) quotes a segregationist poem that made rounds in Atlanta in 1957:

> Po' white folks must labor, 'tween sun and sun,
> To pay welfare taxes whilst we has de fun,
> We doan pay no taxes, we doan make no goods,
> We just raise little niggers, way back in the woods.... (p127).

Above all else, whites feared that integration would jeopardize their single largest investment – the value of their home (Helper 1969), as well as the quality of their neighborhood (Kruse 2005). The tight coupling between property values, public goods, and racial exclusivity was inexorably tied to the racism embedded in the real estate market (Hayward 2013) and the poor public goods that cities had provided to neighborhoods of color in decades past (Myrdal 1944, Torres-Rouff 2013). Kruse (2005) explains that, "by the time white homeowners confronted racial transition at their neighborhood's borders, the American real-estate industry had completely embraced the idea that such racial transition would, without doubt, lead to a devastating decline in property values" (p60). Public policies like redlining and expulsive zoning[136] and private actions like racial steering and white flight would make this relationship true over the long run.[137]

[136] Expulsive zoning is the practice of siting industrial, semi-industrial, or other nuisances in neighborhoods of color in order to both preserve white neighborhoods and induce black movement into particular parts of the city.
[137] In the short run, blacks paid much higher prices than whites for comparable housing (Cutler and Glaser 1997). This fact was what made it so lucrative for individual whites to abandon neighborhood protection and move to the suburbs. In Atlanta, Kruse (2005) analyzes the property values in a neighborhood that transitioned from white to black between 1950 and 1960, and finds that the property values rose 27 percent over this decade.

Although many whites agreed on the desirability of residential segregation,[138] they were stymied by various hurdles. The Supreme Court had ruled racial zoning (the designation of certain neighborhoods as being inhabitable only by whites) unconstitutional in 1917, so a perfectly direct policy approach to residential segregation was not an option.[139] Instead, the preservation of white communities required collective action to prevent individual homeowners from selling or leasing to minority residents. As minority populations expanded and white homeownership rates skyrocketed, hundreds of white homeowners' organizations arose in the 1940s, 50s, and 60s (Sugrue 1996, Kruse 2005).[140] Such organizations were often created by real estate developers to protect the value of their investment. This was a charge taken seriously by property owners. These (typically all white) "civic associations, productive associations, improvement associations, and homeowners' associations" (Sugrue 1996, p211) fought the building of public housing in their neighborhoods, sought representation on planning boards, and battled open housing laws (Self 2003).[141] Importantly, they relied on racial restrictions in housing deeds (and racism in the real estate market) to maintain neighborhood exclusivity. But the Supreme Court ruled restrictive covenants unenforceable in 1948 (*Shelley v. Kraemer*), and an open housing movement swept the nation. Then, in the 1950s, other tools of segregation came under fire as the court struck down separate-but-equal accommodations in a series of cases.[142]

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[138] In 1964 only 27% of white Americans supported general integration (Schuman et al 1985).
[139] Many white neighborhoods also utilized violence to defend their borders (Meyer 2000, Hirsch 1983). Although tolerated (even encouraged) by the police and political establishment of some cities, murders and arson were technically illegal as well.
[140] In some cases, the link between segregationists and homeowners' groups was direct. For example, the head of Atlanta's West End Cooperative Corporation had gotten his start in community organizing as the head of Klavern No 297's Housing Kommittee (Kruse 2005 p54).
[141] They also served as social organizations welcoming new neighbors and organizing block parties (Sugrue 1996).
[142] e.g. *Muir v. Louisville Park* 1953, *Brown v. Board of Education* 1954 & 1955, *Holmes v. Atlanta* 1955, *Dawson v. Baltimore* 1955, *Rice v. Sioux City Memorial Park Cemetery* 1955, *Browder v. Gayle* 1956, *Burton v. Wilmington* 1961, *Johnson v. Virginia* 1963, *Simkins v. Cone Memorial Hospital* 1963, *Watson v. City of Memphis* 1963.

By this time, nearly all cities utilized zoning in some fashion and many invoked the power of eminent domain to shape development through, for example, the permitting of multi-family housing, the razing of slums, and the placement of highways, public housing, and industry. In the past, white homeowners had successfully used these tools to configure residential demography (Nightingale 2006) – but they became even more important in the face of new court decisions and the rising Civil Rights Movement.[143] At the same time, racial violence continued to erupt. However, local elites were committed to maintaining peace in their cities (Ogorzalek 2017). So, in order to convince city governments to defend their turf, white neighborhoods needed to change their approach.

In city after city, white middle class, homeowners turned away from claims based on racial exclusivity and began to press their demands in terms of rights; a tactic Sugrue (1996) terms "defensive localism" (p210). White residents fought for the, "'right' to select their neighbors…the 'right' to do as they pleased with their private property…and the 'right' to remain free from what they saw as dangerous encroachments by the federal government," (Kruse 2005, p9). Local governments responded with neighborhood protection by pursuing "racial stability through spatial apartheid" (Lassiter 2006, p52). In the South, these arguments were the moderate path – a response to violent white supremacy on the right and integrationists on the left (Lassiter 2006, Kruse 2005). The fact that rights-based language gained ground in all regions of the United States meant that it offered a powerful basis for the rise of a national movement.

[143] Throughout this period, neighborhood organizations also sought to maintain the color line using private mechanisms as well. For instance, some organizations raised funds to repurchase homes sold to black families in order to sell them back to whites. They also pressured real estate agencies and lenders to refuse to sell to black buyers. Additionally, they set fire to homes on the black market and newly purchased homes by black owners (Kruse 2005, Sugrue 1996). The problem with such tactics is that they were always susceptible to a sort of prisoner's dilemma. It was incredibly lucrative for a single white homeowner to sell her home to a black family and this idea made individual white owners skittish about neighborhood transition. Neighborhood organizations constantly urged owners to think of the common good rather than their bottom line, but frequently failed.

The discourse had several facets. Subscribers claimed support for racial integration in theory (so as to distinguish themselves from the ugliness of Jim Crow), but angrily opposed government intervention in racial uplift or equalization (Lassiter 2006, p137). In fact, integration was typically viewed in zero-sum terms – gains for blacks equated to losses for whites. Government attempts to produce equal outcomes were understood to be an elevation of minority rights above those of the majority (Sugrue 1996, p227), a form of "reverse discrimination" (Lassiter 2006, p123). Policy solutions to redress inequality were cast as the work of an insidious, "'liberal elite' made up of judges, intellectuals, and government bureaucrats" (Hall 2005, p5).

Further drawing on racialized beliefs about the distribution of tax burdens, neighborhood defenders argued that they should not have to pay for public benefits or welfare for those who did not contribute to the public pool. So when people of color demanded, and then the court ordered, desegregation of public spaces and residential communities, these views culminated in all out tax-revolts among white residents. In cities like Atlanta, whites urged the city government to eviscerate the public budget, eliminate bus lines, as well as close pools and public parks (Kruse 2005). Whites voted down bonds for civic improvements, abandoned public schools, and railed against an activist government. In the end, many of these residents would leave the city altogether – packing up their belongings and their newly appropriated ideology and moving to the suburbs (Nall 2015, Boustan 2010).

Yet, suburban growth largely happened for market reasons that were unrelated (or at least, only tangentially related) to racial conflict in cities (Jackson 1985). As Chapter 1 revealed, by 1970, a plurality of the population lived in suburbs and more than 60% of Americans owned their homes. As the pace of suburbanization and homeownership picked up, arguments

surrounding neighborhood defense lost explicit racial designations of who contributed and who did not and who had a right to high property values and good services and who did not. As Self (2003) explains, the move away from making overt racial claims was, "intended to inoculate segregation and white privilege against charges of racism" (p268). This new language offered a "color-blind" approach to the maintenance of neighborhood boundaries. This rhetoric perpetuated the myth that residential segregation was a matter of economics and individual choice. White homeowners came to see segregation as the consequence of "meritocratic individualism" – not fostered by public policy or law (Lassiter 2006, p1). Those who lived in segregated minority neighborhoods could thus be blamed for their condition, making them undeserving of social assistance.

Maintaining exclusively white neighborhoods in the central city was possible with the help of cooperative city governments. But it was much easier in the suburbs, where a combination of public policies and private actions made homeownership only available to white residents (Jackson 1985, Hayward 2013). By 1970, neighborhoods (both within central cities and outside of them) that had maintained their whiteness despite the massive demographic shifts over the preceding 30 years had developed a distinctive, conservative approach to politics throughout the nation. Homeowners in these places expected low taxes, they rationalized racial segregation and inequality as the product of meritocracy, and they conflated white exclusivity with high property values (Self 2003, Lassiter 2006). They couched their demands in terms of protection of individual property rights. In so doing, they drew on a long tradition of American conservative principles emphasizing economic individualism, limited government, and equality of opportunity, but not outcomes (Feldman 1988, McClosky and Zaller 1984, Kinder 1998).

Nearly forty years later, these neighborhoods continued to foster distinctive politics. Whether or not new arrivals to defended neighborhoods had been involved in the earlier battles, they came to, "accept the politics born out of white flight all the same. They embraced a new middle class rhetoric of rights and responsibilities" (Kruse 2005, p245). The Republican Party came to embrace the neighborhood defenders. Starting in the 1960s and throughout the 1970s, Republicans positioned themselves as the party that would help whites to resist social change and impose order in their environments (Hetherington and Weiler 2009, Carmines and Stimson 1989). These ideals held sway in defended neighborhoods and residents dutifully sorted themselves into the Republican Party.

The arguments appropriated in support of neighborhood defense in the 1950s and 60s are still visible in politics today. In the 2012 presidential election, Republican nominee Mitt Romney proclaimed:

> There are 47 percent of the people who will vote for [the Democratic incumbent] no matter what…who are dependent upon government, who believe that they are victims, who believe the government has a responsibility to care for them, who believe that they are entitled to health care, to food, to housing, to you-name-it. That that's an entitlement. And the government should give it to them….These are people who pay no income tax…My job is not to worry about those people. I'll never convince them they should take personal responsibility and care for their lives (Corn 2013).[144]

Like the homeowners' organizations of the mid-century, Romney's statement invoked a class (not race)-centered view of deservingness. Forty-seven percent of the American public, Romney implies, "doan pay no taxes," and rely on government benefits for subsistence. Romney's claim

[144] More boldly, 2016 Republican nominee Donald Trump's first wife explained, "I have nothing against Mexicans, but they [come] here — like this 19-year-old, she's pregnant, she crossed over a wall ….She gives the birth in American hospital, which is for free. The child becomes American automatically. She brings the whole family, she doesn't pay the taxes, she doesn't have a job, she gets the housing, she gets the food stamps. Who's paying? You and me." http://nypost.com/2016/04/03/ivana-trump-opens-up-about-how-she-advises-donald-his-hands/

that these non-contributors do not take personal responsibility for their lives recalls the meritocratic arguments white homeowners made in the past about their success and their neighborhoods. It is unsurprising then, that defended neighborhoods have offered disproportionate support to Republican candidates and conservative policies in recent years.

The Effect of Context

To say that neighborhoods condition political views and actions is not novel. A great deal of research investigates contextual effects on public opinion and political behavior. A significant portion of this literature focuses (as I do here) on the community's racial composition.[145] Some scholars find that diversity produces tolerance (e.g. racial contact theory; Allport 1954, Oliver 2010, Sigelman et al. 1996). Others find the reverse - that large minority populations are related to racial intolerance and lack of support for spending on race-focused or race-coded policies (e.g. racial threat theory; Key 1949, Gay 2006, Huckfeldt 1986, Orey 2001, Taylor 1998, Bobo and Hutchings 1996, Blalock 1967, Alesina and Glaeser 2004, Tolbert and Hero 1996, Plotnick and Winters 1985, Enos 2016, Baybeck 2006). Scholars also find a negative relationship between diversity and support for taxation, spending, and public goods provision more generally (Alesina et al. 1999; Glaser 2002; Alesina and Spolaore 1997; Easterly and Levine 1997; Poterba 1997; Habyarimana et al. 2007, 2009; Putnam 2007; Cutler et al. 1993; Goldin and Katz 1999, Hopkins 2009, Vigdor 2004). My argument draws on both of these frames to argue that rights-oriented conservatism was fueled in an environment of racial threat (integration in the 1940s, 50s, and 60s), but became entrenched in an environment of racial isolation (whiteness of the neighborhood in the 1970s). Today, white conservatism at the

[145] Other work on context analyzes social networks (Eulau and Rothenberg 1986, Zuckerman 2005), partisan contexts (Ceaser 2013 and DiSalvo 2006) and economic contexts (Gay 2006, Books and Prysby 1999, Oliver 1999, Oliver and Mendelberg 2000)

individual level is associated with homogeneity *not* diversity in neighborhoods. The whiteness of a neighborhood could produce individual-level conservatism through two different mechanisms: the nonrandom migration of individuals into or out of whiter neighborhoods (i.e. sorting/selection), or by directly affecting the ideology of residents (i.e. treatment). The sorting mechanism is supported by research demonstrating the existence of white flight (Boustan 2010, Nall 2015) and work that offers evidence of residential choice based on differing preferences for integration and other community features (Mummolo and Nall 2016, Cho, Gimpel and Hui 2013, Bishop and Cushing 2008, Card, Mas, and Rothstein 2008, Charles 2006). A treatment effect is consistent with work showing that particular types of places generate distinctive preferences as a result of features like population density or community size (Rodden 2011, Gainsborough 2001, Ogorzalek 2017, Oliver 2001).

Treatment is also consistent with work revealing differences across places that magnify the individual attributes of inhabitants – such as when minority neighborhoods lack elite networks (Wilson 1987, Widestrom 2015). A treatment effect is further predicted by scholarship that finds that neighborhood homogeneity breeds racial hostility and intolerance due to a lack of exposure to or contact with neighbors of different backgrounds (Oliver and Mendelberg 2000, Oliver and Wong 2003). Finally, a treatment effect is indicated by scholarship demonstrating what Acharya, Blackwell, and Sen (2016) refer to as the "historical persistence of political attitudes" (p2). Patterns of race relations developed during early periods of American history generated opinions and behaviors among whites in particular places that were transmitted over time and remain detectable in modern politics (see also Hersh and Nall 2016). My argument is similar: battles over integration that occurred mid-century imbued defended neighborhoods with distinctive political attitudes that are communicated through processes like neighborhood social

interaction (Huckfeldt and Sprague 1995) and/or "low-intensity cues" - the casual observation of ones' neighbors (Cho and Rudolph 2008).

Very likely, both selection and treatment processes are at work here. Some residents of defended white neighborhoods brought their conservatism with them; others adopted it after arriving. Today, defended neighborhoods are also likely to continue to attract movers with conservative preferences. Without detailed panel survey data, I cannot discern which is the more powerful factor. What I am able to demonstrate is that neighborhood traits from the 1970s predict conservatism at aggregate and individual levels above and beyond the mobility of the population and the demographic makeup of the neighborhood today.

Conservatism and Race

Just as it is not novel to propose that neighborhoods affect political behavior, it is also not novel to propose that modern conservatism and Republican voting are rooted in racial conflict (see Hutchings and Valentino 2004 for a thorough review). Indeed, it is uncontroversial to state that the Civil Rights movement was a catalyst for partisan realignment, as Southern Democrats abandoned the party championing the rights of Black Americans (Frymer 1999, Carmine and Stimson 1989, Miller and Shanks 1996).

Since the 1970s, scholars have argued that white public opinion shifted mid-century, from a willingness to endorse Jim Crow style race prejudice/biological racism to subtler/symbolic expressions of racial resentment (see for example, Sears and Kinder 1971, Kinder and Sears 1981, McConahay 1982, Sears 1988, Kinder and Sanders 1996, Sears et al. 1997, Bobo 1983, Bobo, Kluegel, and Smith 1997, Schuman et al. 1997).

Additionally, a sophisticated literature on public opinion and political behavior reveals that racial attitudes are strongly predictive of views toward redistributive spending (Bobo and Kluegel 1997, Sears 1988, Kinder and Sanders 1996, Rabinowitz et al. 2009, Federico 2005, Gilens 1999, Quadagno 1994, Luttmer 2001) and government policies that have become racially coded (Winter 2006, Valentino, Hutchings, and White 2002, Mendelberg 2001, Hurwitz and Peffley 1997). If an individual holds negative stereotypes of racial minorities, he or she is likely to oppose expenditures on functions like welfare, and even all government spending in some settings (Sears and Citrin 1982).

What I add to these debates is not a link between racial politics, public opinion, ideology, and party identification, but a new perspective on location. The marriage between rights-based conservatism and white perspectives on race was amplified in the crucible of *city* politics throughout the postwar period not just at the state and national levels. And neighborhood defense appears to have played a causal role in the development of a host of conservative political opinions that appear to be "nonracial" (Hutchings and Valentino 2004, p6).

Empirical Evidence

I've argued that local battles over integration of public spaces in the postwar period led some whites to pursue exclusively white neighborhoods. To generate government support for segregation, neighborhood defenders turned to a set of conservative arguments that highlighted their meritocratic success. Because the Republican Party protected defenders' rights to choose their neighbors, it won their allegiance. If my argument is correct, we should find 1) that integration pressures are related to a higher incidence of exclusively white neighborhoods and 2) that residents of homogeneous white neighborhoods are more conservative and more Republican.

Testing these claims requires that I measure the presence of exclusively white neighborhoods (as the dependent variable in the first hypothesis, and as the independent variable in the second). To do this, I constructed a dataset using a proprietary product developed by GeoLytics called the Neighborhood Change Database (NCDB). The NCDB matches and normalizes census tracts between 1970 and 2000, allowing for a direct comparison of neighborhoods over time. To this, I add census tract data from the 2011 American Community Survey, matched to 2000 boundaries. I refer to neighborhoods that have a greater share of white residents than the metropolitan area as a whole as white defended neighborhoods; conversely, neighborhoods that have a greater share of residents of color than the metro area are called minority dominated neighborhoods. I use this relative conception because many residents are constrained to a particular metropolitan area by preferences or needs (Mummolo and Nall 2016), but the choice of neighborhood within that metro area may be more flexible. I capture this dynamic by measuring the demographic makeup of neighborhoods *compared to* the demographic makeup of their larger metropolitan area. This variable is the *Tract-Metro Difference in Percent White Residents.*[146] Neighborhoods that are whiter than the metro area as a whole have a positive value and those that have more people of color take on a negative value. In 1970, the average neighborhood was only very slightly whiter than the metro area (Mean= 0.018), but the distribution has a long left tail, indicating many neighborhoods that were overwhelmingly populated by people of color; by 2011, the distribution was more normally distributed, with a mean just slightly less than zero. This difference in distributions reflects the diversification of the nation and the well-documented finding that neighborhood level segregation between whites

[146] The census did not tabulate whites separately from Hispanics in 1970, but did in 1980, 1990, 2000, and 2011. Where possible I use non-Hispanic whites

and people of color has declined substantially since the 1970s (Vigdor and Glaeser 2012, Frey 2014).

In order to determine the effect that pressures for integration had on neighborhood demographics, I take advantage of a dataset compiled by Nathaniel Baum-Snow and Byron Lutz (2011) that records the timing of federal court orders for desegregation of public schools in central cities.[147] Although *Brown v Board of Education of Topeka* determined the unconstitutionality of segregated schools, a specific court order was nearly always required for large, central city districts to pursue desegregation plans. The data include court orders implemented between 1960 and 1990 for 92 central school districts in metropolitan statistical areas. Of these 92 orders, 48 are in the South, 9 are in the Northeast, 20 are in the Midwest, and 15 are in the West.

My examination does not include metropolitan areas that never faced a desegregation order. The factors that led some metro areas to receive court-ordered school desegregation plans and others not to receive such plans are most certainly not random, and are likely related to the outcome of interest here (the presence of white defended and minority dominated neighborhoods). Inclusion of the districts with no court order would thus be likely to violate the identifying assumption on the desegregation parameter. However, for those central cities in metropolitan areas that *did* receive an order, the timing of that order is plausibly exogenous to unobserved time-varying factors *within* metropolitan areas that might affect segregation due to the vagaries of the judicial process. The precise date at which court orders took effect was

[147] The data are described completely in the statistical appendix to Baum-Snow and Lutz (2011)'s paper. The appendix is available at: https://www.aeaweb.org/aer/data/dec2011/20080918_app.pdf

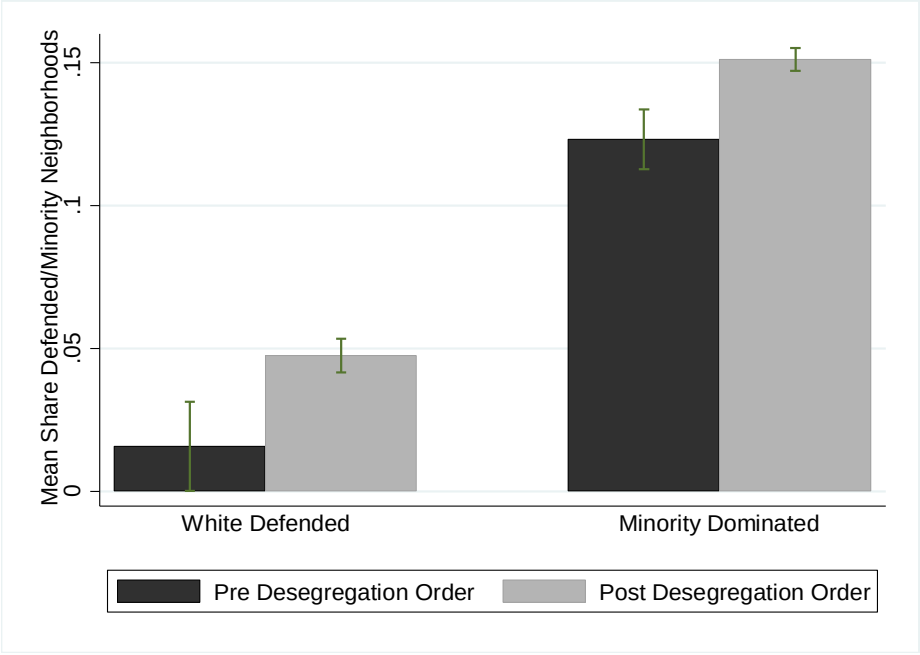
related to differences in the length of the appeals process for otherwise similar metropolitan areas (Baum-Snow and Lutz 2011).

Including Metropolitan Statistical Area (MSA) fixed effects ensures that the analysis compares the presence of defended/minority neighborhoods before and after the implementation of the court order in each metro area, while accounting for variation across MSAs. For each metropolitan area, in each of four census years (1970, 1980, 1990, and 2000), I calculated the mean *Tract-Metro Difference in Percent White* and the standard deviation of this measure. I then generated a count of census tracts that were either greater than or less than one standard deviation away from the mean racial difference for each census year in each MSA. These counts form the numerator for the share of all neighborhoods that are *White Defended* or *Minority Dominated*. These shares serve as dependent variables in my analyses. The key independent variable in my analysis, *Desegregation Order*, is a dummy indicator coded from the Baum-Snow and Lutz (2011) data noting whether or not a desegregation order was in place in the MSA's central city for a given census year. The analysis compares the number of defended/minority neighborhoods before and after the implementation of desegregation by the federal government in each MSA.[148] As controls, I add the log of the *Total Population* in the MSA, the share of MSA households *Renting* their homes, the *Wealthy* share of households (households with incomes above the 90th percentile), and the population *Density* of the MSA. While it is unlikely that these factors are related to desegregation order timing, directly, it is possible that they reflect an underlying time trend that influenced implementation as well as the propensity for

[148] Of the 92 metro areas in the dataset, 64 had orders implemented between 1970 and 1990. Because tract-level data was not available for most areas in 1960, I am unable to estimate change for 28 metro areas. These MSAs are still included in the regressions – just with no change on the desegregation order variable.

segregation. Figure 7.1 displays the marginal effects of desegregation orders, holding the control variables at their mean values.

Figure 7.1: Federal Desegregation Orders Increase Residential Segregation



The figure shows that desegregation orders significantly increased the share of neighborhoods that were both white defended and minority dominated. On average, desegregation orders generated about 30 new homogeneous neighborhoods in metropolitan areas. Homogeneity was achieved when **whites** moved within cities to new neighborhoods and to the suburbs.[149] Approximately two-thirds of the exclusive white neighborhoods in this dataset

[149] Baum-Snow and Lutz (2011) provide evidence that Black families responded to desegregation orders by moving into newly integrated central school districts suggesting that changes in homogeneity of neighborhoods would have been driven by white not black movers.

are located in suburban places and about three-fourths of the homogeneous neighborhoods of color are located in central cities.

Did these homogeneous neighborhoods produce identifiably different politics? In short, yes. To provide evidence of this claim, I measure the homogeneity of neighborhoods continuously for a single year - 1970. I use 1970 because this year marked the height of residential segregation in America and the end of the post-war period of massive demographic change (Cutler, Glaeser, and Vigdor 1999). First, I analyze the effect of neighborhood homogeneity on the aggregate 2008 presidential vote. Then, I turn to individual-level data. I find that homogeneity in 1970 predicts conservatism today.

My first dependent variable is the 2008 *Democratic Share* of the two-party presidential vote aggregated to the census tract level for the 49 states that collect vote data by precinct.[150] Precinct-level vote returns are available from the Harvard Elections Database Archive.[151] Using ArcGIS, I combined the precinct vote data with 2000 census tract boundaries available from the National Historic Geographic Information System archive.[152] I aggregated precinct-level votes to the census tract level.

My independent variable is the *Tract-Metro Difference in Percent White, 1970*. This measure captures the difference between the tract-level share of residents who were white and the metro area-level share of residents who were white in 1970. I control for the 2000 tract-level *Percent White*, the share of the tract that *Rents* their home, and the share of the tract's households

150 Oregon conducts all elections by mail, so geographically allocated votes are not available.
151 A combined, projected polygon shapefile was very generously provided to me by Clayton Nall.
152 Because precinct boundaries sometimes cross-tract boundaries, I calculated the land-area share of each precinct falling within each census tract. I used this geographic share as a weight on the total votes for the Democratic and Republican candidates before aggregating precinct vote totals to the tract level.

that are *Wealthy* (incomes above the 90th percentile). These variables account for the possibility that whiter tracts in 1970 are simply populated by more whites and homeowners today, and so, are more conservative only as a result of their current demographics. I also add the *Density* of the census tract (total population divided by total area) to account for Rodden's (2011) argument that the source of modern liberalism is housing density. To investigate the role of selection, I add a measure of the share of the tract's residents who lived in the same house in 1995. In a third analysis, I add fixed effects for region. In all analyses, I use ordinary least squares regression and cluster errors by MSA. Table 7.1 presents the results of these regressions. Summary statistics are shown in appendix Table A7.1.

Table 7.1: Effect of 1970 Relative Whiteness on 2008 Democratic Vote Share

	Column 1			Column 2			Column 3		
	B	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	-0.422	0.016	0.000	-0.112	0.023	0.000	-0.080	0.019	0.000
% White 2000				-0.340	0.026	0.000	-0.408	0.021	0.000
% Renters 2000				0.244	0.024	0.000	0.184	0.025	0.000
% Wealthy 2000				0.116	0.036	0.001	0.121	0.040	0.003
% Same House 1995				0.183	0.044	0.000	0.043	0.042	0.306
Density				1.356	1.164	0.245	-0.143	0.725	0.843
Midwest							0.020	0.013	0.115
South							-0.108	0.018	0.000
West							-0.073	0.020	0.000
Constant	0.631	0.013	0.000	0.628	0.044	0.000	0.816	0.040	0.000
R^2	0.207			0.584			0.643		
N	44,958			44,958			44,958		

Note: OLS regression, robust standard errors clustered by MSA presented.

A neighborhood of color in 1970 (*tract-metro difference* = -0.5), delivered about 84% of its votes to Barack Obama in 2008. A neighborhood that was white defended in 1970 (*tract-metro difference* = 0.5) offered Obama only 42% of its votes in 2008.[153] Obviously,

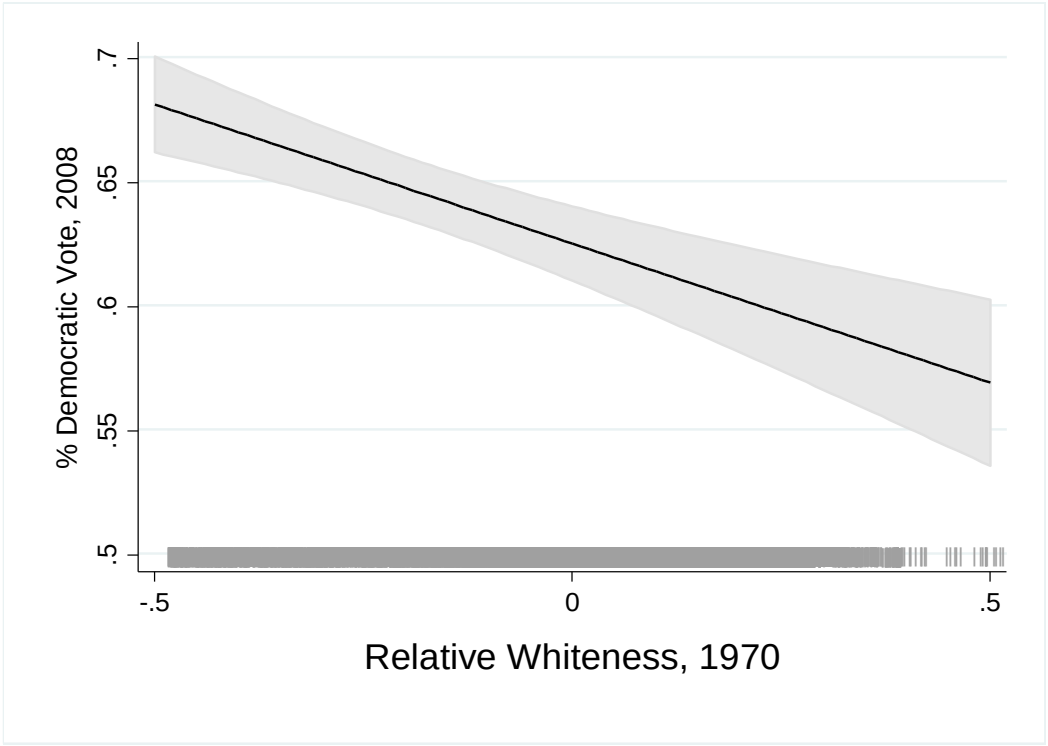
[153] Estimates generated following the regression presented in Column 1, using the margins command in Stata 14.

demographic patterns are persistent – one explanation for this outcome is that these neighborhoods that were white defended and minority dominated in 1970 are still populated with whites and people of color today. But as Column 2 shows, even accounting for contemporary demographics, neighborhoods that were relatively whiter in 1970 were about 11 percentage points less likely to support Obama relative to McCain. The difference between the least white and most white neighborhoods in 1970 is 22 percentage points – even controlling for whiteness in 2000.

Contrary to a pure selection story, census tracts with more stable populations were more (not less) likely to support Obama and there is no interaction effect between stability of the population in 1995 and the whiteness of the neighborhood in 1970. That is, if selection were entirely driving these results, we would expect that tracts that were both white in 1970 and had a large share of movers would be most likely to support the Republican candidate. This is not what we see. Holding all other variables at their mean values, Figure 7.2 presents the results from Column 2 graphically for the densest portion of the distribution on the independent variable.[154]

[154] This portion of the distribution reflects the concepts of white defended and minority dominated neighborhoods. The mean value of the 1970 tract-metro difference in percent white for minority dominated neighborhoods was -0.5 and 0.25 for defended neighborhoods.

Figure 7.2: Effect of 1970 Neighborhood Characteristics on 2008 Presidential Election Votes, Controlling for Demographics in 2000



The third column of Table 7.1 reveals that the relationship holds even when accounting for differences in mean levels of Democratic support across regions. Despite the robustness of the effect of 1970 demographics on 2008 presidential votes, it is possible that some set of uncontrolled factors affect the relative whiteness of neighborhoods in 1970 and Republican support in 2008. In an effort to determine a causal neighborhood effect, I instrument for relative whiteness in 1970 with topographical features measured at the census tract level - relative elevation of the census tract (accounting for waterfront neighborhoods) and the tract's distance from the nearest large city.

Starting perhaps with Burgess's concentric zone model of urban social structure (1925), scholars have noted that metropolitan areas often develop such that the most desirable residential neighborhoods are those that are as far as possible from the central business district, but still within commutable distance. From early on, distance from the center denoted privilege; and the historical record indicates that movement to outer lying areas was more available to whites than people of color for many decades (Jackson 1985).[155]

To measure distance from the nearest central city, I used 2010 place boundaries available from the National Historic Geographic Information System. Using data from the 2011 American Community Survey, I determined the largest population center in each metropolitan area. I converted these central cities and 2000 census tracts to centroids in ArcGIS. I measured the Euclidean distance between the closest central city and each census tract (using a near table with only one match). To generate a normal distribution, I took the natural log of this distance. The resulting measure, *Distance to Center City* (logged), is my instrumental variable.

To be useful, an instrumental variable must predict the primary independent variable, but not directly affect the dependent variable. As explained above, there is good reason to believe that a neighborhood's distance from the nearest central city positively affects the share of residents who are white in that community. There is no reason to believe that neighborhoods that are far from the city center will house Republican supporters *aside* from their demographic characteristics. However, race is not the only relevant demographic trait. Living outside of the city center also requires residents to be able to afford housing and commuting costs and

[155] That said, at no point in American history has it been the case that black central cities have been ringed by heavily populated white suburbs. This is because when suburbs WERE all white (in the 1920s), they were not heavily populated and central cities were majority white as well. By the time some central cities became majority minority, suburbs had also become more integrated. This fact is further evidence that the correct measure of residential racial context is the racial makeup of the neighborhood as compared to the metropolitan area as a whole.

obviously, race is correlated with socio-economic status. I account for this by adding the share of households in the tract that *Rents* their homes, and the share of households that are *Wealthy* as of 1970 in the first stage of the instrumental analysis.

As in the regressions presented in Table 7.1, my instrumental analysis controls for the share of the population that is white in 2000, the share of the tract that lived in the same house in 1995, and the tract's population density. My dependent variable is again the tract-level aggregate measure of the two-party *Democratic Vote Share* in 2008. I use a two stage least squares regression, with errors clustered by MSA. Table 7.2 presents the results of this estimation.

Table 7.2: Effect of 1970 Relative Whiteness on 2008 Democratic Vote Share, Instrumental Variable Analysis			
	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	-0.226	0.091	0.013
% White 2000	-0.341	0.042	0.000
% Same House 1995	-0.051	0.027	0.062
Density	5.627	1.862	0.003
Constant	0.856	0.031	0.000
FIRST STAGE			
% White 2000	0.290	0.021	0.000
% Same House 1995	-0.272	0.032	0.000
Density	5.548	0.960	0.000
Distance to City Center (logged)	0.015	0.004	0.000
% Renters 1970	-0.141	0.040	0.000
% Wealthy 1970	0.248	0.033	0.000
Constant	-0.195	0.048	0.000
R^2 (second stage)	0.544		
N	44,970		

Note: Two Stage Least Squares Regression, robust standard errors clustered by MSA presented F Test of Excluded Instruments = 50.55

The results of the instrumental variable analysis offer strong additional support for my argument that the defended/minority status of a neighborhood in 1970 continues to exert a powerful, independent, causal effect on partisanship in modern elections. The political identity of neighborhoods appears persistent. In the next section, I provide individual-level evidence of the conservatism of defended neighborhoods.

Individual Level Conservatism

Obtaining individual-level survey data that is representative of city populations is notoriously difficult (Tausanovitch and Warshaw 2014). The costs of sampling across many localities, in addition to the complexity of designing specific surveys for each community, are typically prohibitive for scholars. Instead, I take advantage of the long time series and consistent battery of questions asked by the General Social Survey (GSS). The GSS administers a survey

to an average of 2,000 respondents representing adults living in non-institutional arrangements in the United States on a biennial basis. I create a new dataset built from restricted access GSS data from the 1998, 2000, 2002, 2004, 2006, and 2008 surveys.[156] To the GSS data set, I merge tract and MSA level census data from 1970. To measure contemporary neighborhood demographics, I add linearly interpolated data from the 1990 and 2000 Census of Population and Housing and the 2007-2011 American Community Survey. For tracts not included in the American Community Survey, I use 2000 census data for all years of the GSS. The combined dataset includes tract-level data for 12,188 respondents from 117 metropolitan areas with an average of about 100 respondents per metro area.[157] Although the GSS asks an enormous range of questions each year, only a subset of the survey questions is repeated. This repetition is crucial for my ability to estimate neighborhood effects because I rely on pooling across years to gain a large enough sample size. As a result, I restrict my analyses to questions that include at least 5,000 usable responses. At this threshold, the analyses include an average of 50 responses from each MSA. For the most part, my analyses only include white respondents, as this is the relevant population for my theory.[158] I begin by determining the demographic characteristics of individuals who live in neighborhoods that were defended/segregated in 1970. In this analysis, my dependent variable is the 1970 *Tract-Metro Difference in Percent White* described above. My independent variables include several demographic traits that are known to correlate with vote choice and ideology (Miller and Shanks 1996, Carmines and Stimson 1986, Green, Palmquist and Schickler 2002): the respondent's race (a dummy variable coded 1 for *White, non-*

156 These are the years for which the GSS was able to provide census tract level information for every respondent, which is essential to my analysis. The tract-level information was provided in response to a sensitive data request submitted to the National Opinion Research Center at the University of Chicago.
157 Respondents who live outside of metro areas are excluded from these analyses.
158 It is interesting to note that the results hold for non-white respondents as well. This adds further evidence to my claim that neighborhood context is associated with political conservatism above and beyond the aggregation of residents' demographic traits.

Hispanic)[159], *Age*, *Education* (where 0 is less than high school and 4 is a graduate degree), sex (coded 1 for *Female*), the total number of *Kids* under the age of 18 living at home, marital status (coded 1 for *Married*), and inflation adjusted *Income.*[160] I also add the variable *Mover*, that is coded 1 if the respondent lived in a different city or state when she was 16 years old and 0 if she has lived in the same city.[161] To account for the hierarchical structure of the data, I estimate a multilevel mixed-effects linear regression via maximum restricted likelihood, with random effects at the MSA level. This strategy adjusts the estimates and their errors for place-based correlations in attitudes. Table 7.3 presents the results (summary statistics are shown in appendix Table A7.2).

Table 7.3: Modern Demographic Characteristics of 1970 Neighborhoods

	β	SE	P>|z|
White, non-Hispanic	0.104	0.004	0.000
Age	-0.001	0.000	0.000
Education	0.003	0.001	0.018
Female	-0.008	0.003	0.013
Kids at home	-0.003	0.002	0.082
Married	0.019	0.004	0.000
Income	0.000	0.000	0.000
Mover	0.031	0.003	0.000
Constant	-0.057	0.009	0.000
Random effects parameter	0.069	0.005	
N	10,701		
Number of MSAs	117		

Note: Mixed effects maximum likelihood regression with random effects for MSA

[159] The GSS has a relatively small sample of non-Black racial and ethnic minorities, so I combine all nonwhite racial/ethnic categories.

[160] Approximately 10% of the observations are missing income data. I imputed observations by regressing income on age, education, gender, race, work status, marital status, the number of people in the household, the size of the city, the presence of children at home, and dummy indicators for year for the non-missing observations, generating predicted values, and replacing the missing observations with the predictions.

[161] Ideally, we would like to know whether or not the respondent moved neighborhoods as well, but the GSS does not ask this question.

The estimation reveals few surprises. For example, holding all other variables at their mean values, white respondents live in neighborhoods that were whiter than the metro area in 1970 (0.06), while respondents of color live in neighborhoods that were less white (-0.04). More educated respondents live in neighborhoods that were whiter, as do married, and higher income respondents. Respondents who had moved cities or states since they were 16 chose neighborhoods that were about 4 percentage points whiter than the metro area. Respondents who live in the same city tend to live in neighborhoods that mirrored the metro area. Those with children living at home tend to live in neighborhoods that were less white in 1970, but among middle and high-income respondents this effect reverses. That is, middle and high-income families with kids at home live in significantly whiter neighborhoods.[162] A similar interactive effect occurs with age. Among the poor, older residents live in neighborhoods that were significantly less white in 1970, but among middle and high-income residents, there is no relationship between age and neighborhood characteristics. These results point to several interesting conclusions. First, the results appear to indicate that neighborhoods that were whiter than the metro area in 1970 are more expensive and more desirable. They also suggest that sorting is likely to have played a role in the development of ideology and partisanship of particular places. Finally, these results indicate that it is necessary to control for all of these individual demographic characteristics in any estimation seeking to identify neighborhood effects. I turn to this task next.

I begin with an overview of individual-level partisan affiliation and ideology. I use the 1970 *Tract-Metro Difference in Percent White* as my independent variable in all analyses. My

[162] This interactive relationship is available upon request.

first dependent variable is the respondent's *Partisan Identification*. Respondents were asked, "generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?" Follow up questions asked for the strength of partisanship and pushed independents to identify as leaners. The resulting measure is a seven-point scale running from strong Democrat to strong Republican. Next, I analyze *Ideology* (where 1 is extremely liberal and 7 is extremely conservative), and finally *Republican Presidential Vote*, coded 1 if the respondent voted for the Republican candidate in the most recent election and 0 otherwise.[163] I control for all of the demographic traits included in Table 6.3 except one – *Mover*. I omit this variable because it is missing for a large share of the total observations. Its inclusion does not affect the results presented (and the coefficient is not significant in any of the estimations). In a second set of analyses, I add controls for current neighborhood attributes to provide additional evidence that the political character of neighborhoods was developed historically. These neighborhood variables are the *Percent White* and *Percent Homeowners* in the tract, linearly interpolated for each year of the survey. Both sets of analyses are presented in Table 7.4.

[163] For this last analysis, I use a multi-level mixed effects logistic regression to account for the binary dependent variable.

Table 7.4: Effect of 1970 Neighborhood Whiteness on Modern Partisanship & Conservatism									
	Partisan Identification			**Political Ideology**			**Republican Pres. Vote**		
	β	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	1.003	0.241	0.000	0.963	0.190	0.000	1.259	0.318	0.000
Age	-0.001	0.001	0.555	0.010	0.001	0.000	0.011	0.002	0.000
Education	-0.051	0.019	0.008	-0.113	0.015	0.000	-0.005	0.022	0.831
Female	-0.310	0.043	0.000	-0.194	0.034	0.000	-0.150	0.050	0.003
Kids at home	0.107	0.025	0.000	0.080	0.020	0.000	0.140	0.028	0.000
Married	0.326	0.049	0.000	0.342	0.039	0.000	0.303	0.056	0.000
Income ($100k)	0.417	0.058	0.000	0.177	0.046	0.000	0.477	0.066	0.000
Constant	2.845	0.091	0.000	3.590	0.071	0.000	-1.446	0.112	0.000
	β	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	0.899	0.254	0.000	0.898	0.197	0.000	1.131	0.332	0.001
Age	-0.002	0.001	0.168	0.009	0.001	0.000	0.010	0.002	0.000
Education	-0.045	0.019	0.018	-0.106	0.015	0.000	0.000	0.022	1.000
Female	-0.315	0.043	0.000	-0.198	0.034	0.000	-0.155	0.050	0.002
Kids at home	0.096	0.025	0.000	0.068	0.020	0.000	0.130	0.029	0.000
Married	0.298	0.049	0.000	0.317	0.039	0.000	0.276	0.056	0.000
Income ($100k)	0.355	0.059	0.000	0.118	0.047	0.012	0.420	0.068	0.000
% White Tract	-0.153	0.146	0.294	-0.232	0.113	0.040	-0.052	0.175	0.768
% Homeowners Tract	0.635	0.122	0.000	0.633	0.096	0.000	0.595	0.144	0.000
Constant	2.646	0.125	0.000	3.446	0.097	0.000	-1.703	0.153	0.000
Random effects parameter	0.130	0.026		0.052	0.012		0.247	0.046	
N	8,049			6,558			7,563		
Number of MSAs	116			116			116		

Note: Mixed effects maximum likelihood regression with random effects for MSA; white non-Hispanic respondents only

As was true in the aggregate, at the individual level, the historical persistence of neighborhoods is clear. Places that had defended their exclusive white character as of 1970 are home to significantly more Republican and conservative residents today. This is the case even when we account for both individual and aggregate demographic traits that predict partisanship and ideology.

The same pattern holds when I replace the dependent variable with particular policy items.[164] Respondents who live in neighborhoods that were whiter in 1970 are more likely to view government spending as adequate or too high on categories like social security, parks, and mass transit, and they are more likely to believe that individuals, not the government, should be responsible for health, wealth, and the standard of living.[165] For instance, respondents were asked to place themselves on a five-point scale where at one end the government should do more to solve our country's problems and at the other end the government should leave things to individuals and private businesses. Comparing whites who live in neighborhoods that were minority dominated in the 1970s to those who live in neighborhoods that were white defended moves responses in a conservative direction by about a half of a standard deviation on this scale (from an average of 2.8 to 3.3).

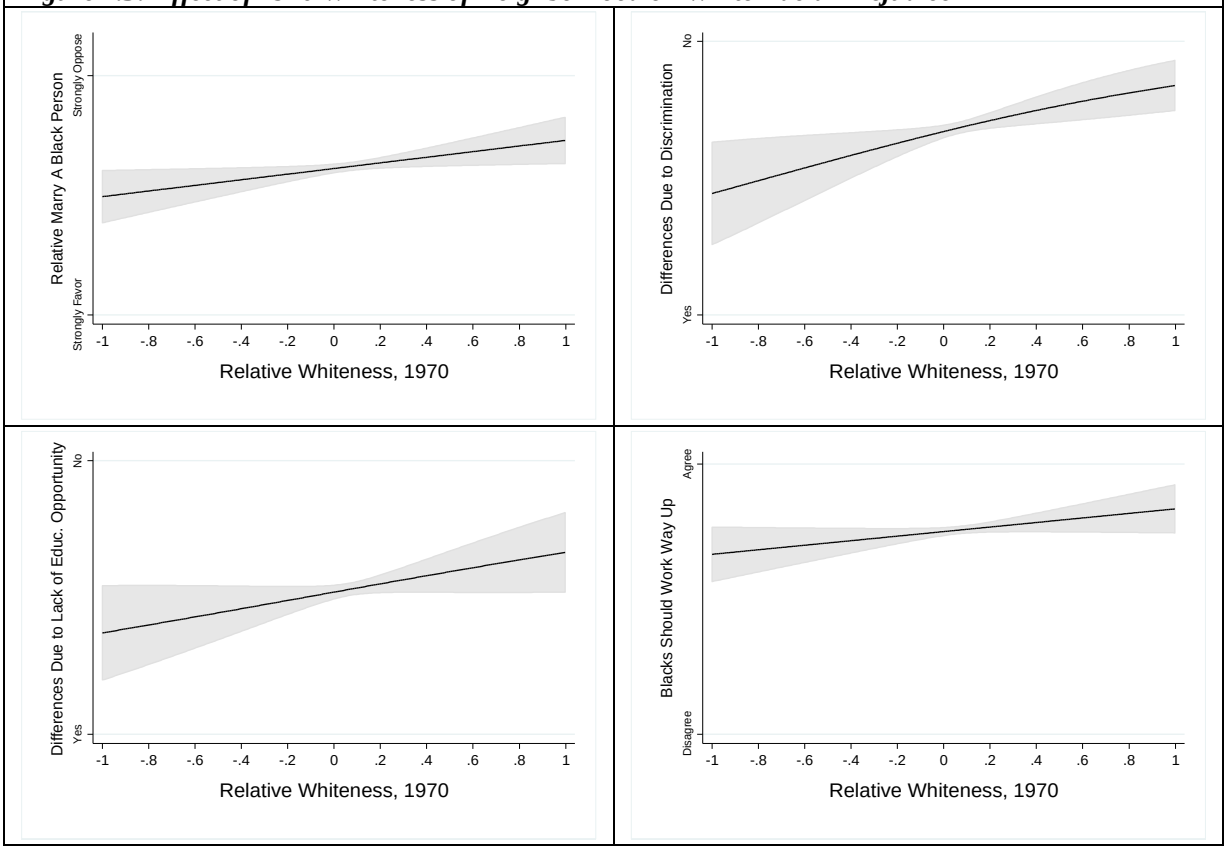
[164] These questions were not asked of all respondents in all years. As a result, in some of the specific policy areas discussed below the total number of respondents falls below 5,000. However, it never falls below 3,000.
[165] One question on which 1970 neighborhood whiteness was not associated with support for lower spending was education. When asked whether or not the government was spending the right amount "improving the nation's education system", there was no difference in the responses of individuals who live in neighborhoods that were whiter in 1970. Although this is obviously circumstantial evidence, it is plausible that the defended neighborhoods have higher quality schools and this is a feature that attracts certain residents who are supportive of higher educational expenditures.

Prejudice and Policy

If integration battles are linked to the ideology of defended neighborhoods, then we would expect residents of these places to have particularly conservative views when it comes to race. I find strong support for this contention. There are many different questions that tap racial views included in the GSS. I use several as dependent variables that are both common in the literature and have a long enough time span to generate sufficient respondents. I begin with an analysis of racial affect and prejudice. The first question asks respondents whether or not they would be in favor of having a family member marry a black person. The second question probes views on inequality. It states "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people." Then it asks: "Do you think these differences are mainly due to discrimination?" and/or "Because most (Negroes/Blacks/African-Americans) don't have the chance for education that it takes to rise out of poverty?" Finally, I analyze responses to the question, "Do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with the following statement: Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without special favors."

All dependent variables are coded so that higher values equate to a more conservative position. The structure of these analyses is the same as those included in the top panel of Table 7.4 (mixed effects maximum likelihood estimation with random effects for MSAs and controls for individual demographic characteristics). Rather than present regression tables, Figure 7.3 graphically display the marginal effects on *Tract-Metro Difference in Percent White, 1970* holding all other variables at their mean values.

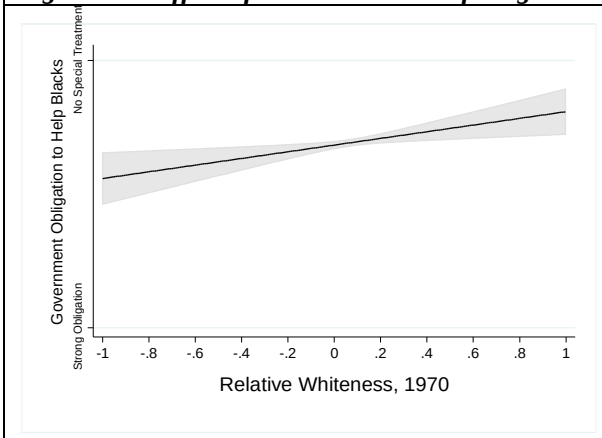
Figure 7.3: Effect of 1970 Whiteness of Neighborhood on White Racial Prejudice



The results presented in Figure 6.3 offer a consistent picture of white residents who live in neighborhoods that were whiter than the metro area in 1970. They are more strongly opposed to having a relative marry a black person, they are less likely to see persistent racial inequality in jobs, income, and housing as the result or discrimination or educational opportunities, and they are more likely to agree that blacks should have to work their way up like white ethnic groups In sum, residents of whiter neighborhoods are more likely to want to avoid close contact with blacks, to blame blacks for conditions of inequality, and put the onus on individuals to advance their position.

These attitudes translate into conservative views on race-targeted policies. To show this, I analyze two questions. The first question reads "Some people think that (Blacks/Negroes/African Americans) have been discriminated against for so long that the government has a special obligation to help improve their living standards. Others believe that the government should not be giving special treatment to (Blacks/Negroes/African Americans). Where would you place yourself on this scale?" Responses were coded on a five-point scale ranging from strong obligation to no special treatment. The second question focuses on affirmative action and asks whether or not respondents are "for or against preferential hiring and promotion of blacks." The responses are coded on a five-point scale ranging from strongly favoring to strongly opposing. Figure 7.4 presents the marginal effects of the regression of these policy responses on *Tract-Metro Difference in Percent White, 1970* holding all other variables at their mean values.

Figure 7.4: Effect of 1970 Whiteness of Neighborhood on Support for Race-Targeted Policy



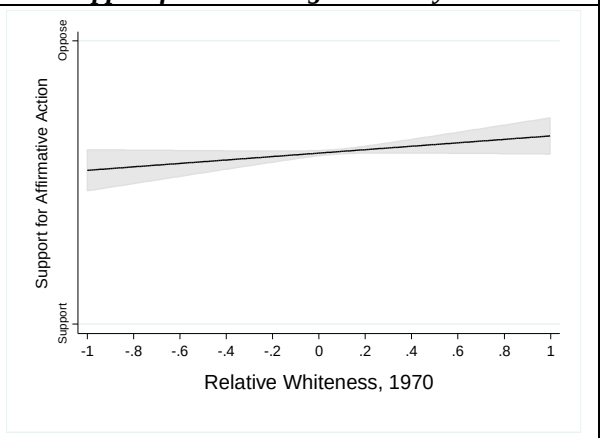


Figure 7.4 reveals that residents who live in neighborhoods that were whiter in 1970 are more likely to hold conservative views on race-targeted policy. They are less likely to feel that the

government has an obligation to make right discrimination against blacks and less likely to support affirmative action.

Conclusion

In sum, there is strong evidence that the language and ideology developed around integration battles in post-war urban America persists. During the tumultuous 1940s, 50s, and 60s, faced with changing legal and rhetorical regimes, white homeowners seeking to keep minorities out of their neighborhoods began to shed the language of racial exclusivity. They understood the defense of their homes and spaces as a defense of their rights as homeowners and freedoms as individuals. Hayward (2013) describes this as the development of an "identity story," a story about "who 'we Americans' are: about what we value, what we want and deserve, and what it is that serves our good" (p119). Hayward is clear though – the Americans included in this vision were not all Americans, but rather all *white* Americans.[166] Yet, the privileged residents of defended neighborhoods promulgated the argument that "race doesn't matter" (Hayward 2013, p176). Instead, they relied on a frame that emphasized their hard work, frugality, and investment in their children's education. This perspective persists in these places. This chapter links 1970s neighborhood demographics to feelings of distance from African Americans, a belief that racial inequality is the result of lack of individual motivation, opposition to policies that redress disparities in outcomes across racial groups, and commitment to conservatism more generally. Residents who live in defended neighborhoods today are more

[166] Hayward (2013) situates the genesis of this identity story earlier in the 20th century than I do here. She argues that it was borne of economic need among developers seeking land use planning and financial support from the government. My narrative is not incompatible with her view. It makes sense that the language adopted by rights-oriented white neighborhoods was readily available when they needed to use it. Hayward argues that the narrative of Americans as a homeowning people developed by real estate interests functioned as a "frame to many ordinary stories" (p167).

likely to identify as Republicans and more likely to vote for Republican presidential candidates.

The local roots of modern conservatism are deep.

Chapter 8: Conclusion

In the early decades of the 20th Century, homeownership rates in the United States were already much higher than in many other advanced democracies. As of 1914, in the United Kingdom 10% of households owned their homes (House of Commons Research Paper, 1999). In the United States the figure was about 45%.[167] During the late 1940s homeownership rates for France and Germany were about 31% and 27% respectively (Kohl 2014). For most families, the home was (and is) the single largest component of household wealth (Knoll et al 2014). Not only homeowners, but all property owners, land-oriented businesses (like real estate agencies), and local governments reliant on property taxes, had a strong incentive to protect and enhance the value of property. In a world of limited resources, they also had a strong incentive to politically control the distribution of public goods increasingly offered to city dwellers.

Yet, homeownership and political power were not equally available to all urban residents. In 1900, the homeownership rate among whites was more than double the rate among blacks (Collins and Margo 1999). Chinese and Japanese immigrants were barred from owning property completely in many states, and everywhere the vast majority of blacks, Asians, and Latinos were prohibited from voting (Keyssar 2000). Thus, as America became an urban nation, it was white property owners who dictated the policies of local governments. They used their power to pursue segregation. By invoking the power of land use regulation and zoning, city governments institutionalized prevailing race and class hierarchies.

In cities across the country, "Chinatowns" (McWilliams 1964, p105), Sonoratowns (Torres-Rouff 2013, p139) and "Niggertowns (Litwack 2004, p9) were walled-off by a combination of public policy, violence, and custom. Local governments then proceeded to

[167] https://www.census.gov/hhes/www/housing/census/historic/owner.html

systematically underinvest in these neighborhoods, denying them adequate sewers, paved roads, garbage collection, or public health initiatives. By the onset of the Second World War, city governments had become proficient segregators. When millions of dollars were spent renewing and rebuilding urban communities, segregation was reinforced and deepened.

By the hands of local governments the foundation of Sampson's (2012) powerful 21st century neighborhood effects, was laid. Using Chicago as a lens with which to view large, diverse cities, Sampson shows that today, neighborhoods differ significantly with respect to "crime, poverty, child health, protest, leadership networks, civic engagement, home foreclosures, teen births, altruism, mobility flows, collective efficacy, [and] immigration" (p6). These differences, Patrick Sharkey (2013) explains, are "*not* attributable primarily to factors that lie within the home or within the individual," but rather to the place itself, passed down from generation to generation (p21). Sampson (2012) argues that, as a result of racial segregation, neighborhood disadvantage is "most pronounced in the black community." These inequalities, Sampson tells us are, "durable and multiplex but not inevitable or natural" (p99).

The consequences are irrefutable. Scholars have persuasively demonstrated that segregation causes higher poverty rates for blacks and lower poverty rates for whites (Ananat 2011), lower high school and college graduation rates among blacks (Cutler and Glaeser 1997), higher imprisonment rates (Burch 2014), and higher rates of single-motherhood among blacks (Cutler and Glaeser 1997). Neighborhood disadvantage is also related to black/white income inequality, lack of employment stability among blacks, and larger gaps in cognitive skills between blacks and whites (Sharkey 2013). Cohen and Dawson (1993) show that neighborhood poverty undermines blacks' attachment to and involvement in the political system. I've shown that segregation leads to racial political polarization and underfunding of public goods.

Cumulatively, these results suggest that both growing up and living in disadvantaged places, while not wholly determining one's fate (e.g. Vance 2016), does leave little margin for error. "Mobility out of the poorest neighborhoods," Sharkey (2013) says "may be even less common than mobility out of individual poverty" (p35). Perversely, home ownership in this environment serves to limit mobility rather than enhance it.

In the first half of the 20th century, advantaged and disadvantaged neighborhoods resided within the political boundaries of large central cities. In the second half of the century, when the suburbs captured most of the population growth, the physical, and more importantly political, distance between advantage and disadvantage widened. Today, the most advantaged places are located outside of central cities altogether so that the most disadvantaged residents have no direct role to play in decisions about building affordable housing, expanding public transportation, or diversifying schools. In these places residents are more politically conservative; they vote at higher rates for Republican presidential candidates, support low taxes, want limited spending, and see inequality as the result of individual failings. Recent research suggests that privatization of public services is the most recent response to integration. Trounstine (2015) finds that a greater share of communities' security and educational needs are met through private provision in more diverse communities. Similarly, Betts and Fairlie (2003) show that native-born American families are more likely to send their children to private high school in response to increased immigration. Given this distribution of preferences and opinions, proposals to reduce inequality through mechanisms like regional governments or tax-base sharing (e.g. Orfield 2002, Katz 1999) are simply politically infeasible.

However, moving the policy debate to the state or federal level, could be more workable. Given that property owners' anxiety about protecting their investment is the driver of the many

patterns I reveal in this text, one solution would be to address this concern directly. William Fischel (2015), has argued that reducing federal tax-subsidies for owner-occupied housing would curtail homeowner demands for exclusivity.

State governments may also be able to make significant progress in generating outcomes that approach equality. There are lessons to be learned from the history of public school provision and finance. In a detailed historical analysis comparing the Charlotte and Atlanta metropolitan areas, Lassiter (2006), finds that the large geographic footprint of Charlotte's school system ensured that school integration would be successful. Conversely, Atlanta's fragmentation ensured that it failed. This indicates that states could analyze school district and municipality incorporation with an eye toward integration; limiting fragmentation and opportunities for segregation. Lafortune, Rothstein, and Schanzenbach (2015) show that recent school finance equalization policies have focused not on the gap in funding between advantaged and disadvantaged districts, but rather on ensuring a minimum adequate level of funding for all districts. They find that these reforms significantly reduce inequalities in student achievement outcomes between districts.

School finance reform has been possible because state constitutions guarantee the provision of public schooling and lawsuits (and threats of lawsuits), have forced the hand of state legislatures. Education is not the only public good guaranteed in state constitutions though. In fact, state constitutions are the locus of many positive rights. As Zackin (2013) details, they also obligate state governments to "care the poor, aged, and mentally ill, preserve the natural environment…and protect debtors' homes and dignity" (p3). Bridges (2015) demonstrates that state constitutions provide state governments substantial authority in the regulation of water provision and the protection of labor. Leonard (2010) outlines state constitutional requirements

mandating provision of health care and public health. Thus, the centralization of public goods financing, or at least the provision of a minimum level of public goods support through state governments is possible, though obviously politically contentious. At the end of the day, what is clear is that much is at stake in the local provision of public goods and the politics of segregation.

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Data Appendix

Chapter 1

Coding of Foreign Born Populations 1900-1940

The Census of Population and Housing collected detailed breakdowns regarding the origin of immigrant populations for large cities between 1900 and 1940. However, the categories of origin changed from Census to Census. I created similar categories by combining subcategories (e.g. I created a Poland variable by combining Austrian Poland, German Poland, and Russian Poland). Using the table available at: http://www.census.gov/population/www/documentation/twps0029/tab04.html, I created a category of immigrants from Southern and Eastern Europe, Asia, and Latin America. Because immigrants from Turkey in Asia were only separately categorized in some Census years, all Turkish immigrants are coded as being Southern and Eastern European, regardless of continent. The category foreign born nonwhite was created by adding the foreign born populations from countries that the 1930 Census designated as sending a majority of immigrants who were classified as nonwhite (China, Japan, India, Mexico, and West Indies).[168] To generate a measure of foreign born diversity, I calculated a Herfindahl Index:

$$Diversity = 1 - \sum_{f=1}^{F} \pi_f^2$$

where, π_f is the population share of the foreign-born group f and F is the total number of foreign-born groups (52). The following foreign born groups were listed in Censuses 1900-1940. The table presents summary statistics for all 291 cities included in these data.

Country of Origin	Mean	Std. Dev.	Min	Max
Africa	0.01%	0.04%	0.00%	1.20%
Albania	0.00%	0.03%	0.00%	0.86%
Armenia	0.14%	0.56%	0.00%	13.11%
Atlantic islands	0.07%	0.82%	0.00%	22.96%
Australia	0.04%	0.11%	0.00%	1.27%
Austria	3.57%	4.23%	0.00%	52.56%
Azores	0.09%	1.02%	0.00%	18.64%
Belgium Luxemburg	0.48%	1.78%	0.00%	25.12%
Bohemia	0.11%	1.24%	0.00%	48.24%
Born at sea	0.00%	0.01%	0.00%	0.21%
Canada newfound	10.15%	12.52%	0.00%	86.47%
Central South America	0.15%	0.34%	0.00%	5.57%
China	0.34%	1.20%	0.00%	39.04%
Cuba West Indies	0.14%	1.23%	0.00%	43.85%
Czechoslovakia	1.41%	3.69%	0.00%	49.42%
Denmark	1.22%	2.67%	0.00%	29.90%
England	8.04%	4.65%	0.28%	40.52%

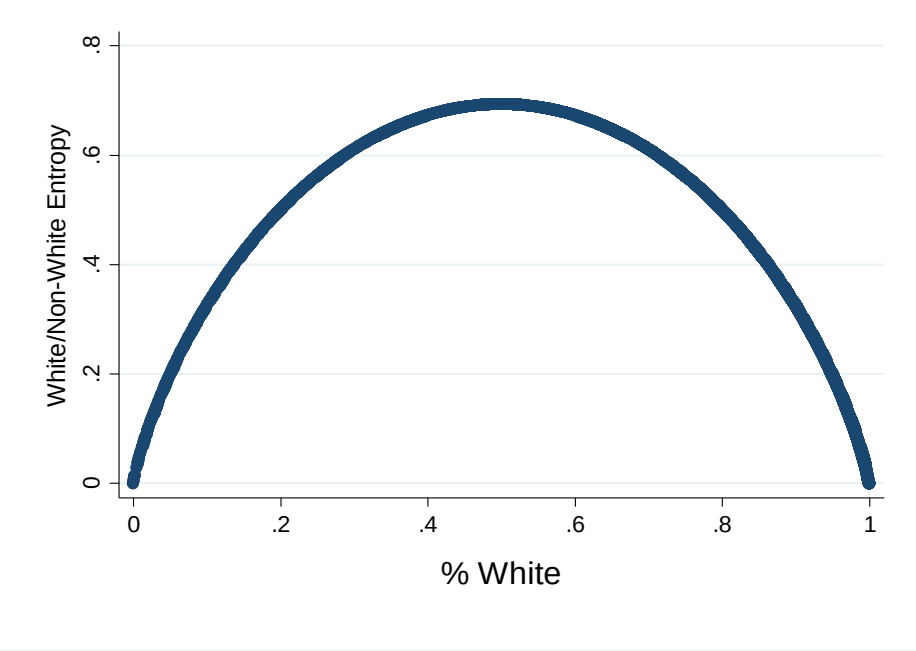
[168] Census of Population and Housing, 1930, Volume II, Chapter 5, "Country of Birth of the Foreign Born," page 231

Estonia	0.00%	0.00%	0.00%	0.02%
Europe, other	0.06%	0.14%	0.00%	3.17%
Finland	0.46%	1.70%	0.00%	21.42%
France	1.21%	1.25%	0.00%	14.62%
Germany	16.92%	14.66%	0.24%	89.81%
Greece	2.07%	2.58%	0.00%	23.83%
Holland	0.07%	1.09%	0.00%	46.72%
Hungary	2.44%	4.66%	0.00%	48.04%
Iceland	0.00%	0.00%	0.00%	0.08%
India	0.01%	0.02%	0.00%	0.47%
Ireland	9.71%	7.63%	0.03%	50.94%
Italy	9.47%	9.14%	0.00%	53.39%
Japan	0.24%	1.10%	0.00%	32.07%
Latvia	0.03%	0.16%	0.00%	2.76%
Lithuania	0.67%	1.48%	0.00%	12.26%
Mexico	1.48%	6.60%	0.00%	91.42%
Netherlands	0.86%	3.92%	0.00%	50.24%
Norway	1.49%	3.43%	0.00%	27.95%
Not specified	0.00%	0.02%	0.00%	0.57%
Other	0.99%	1.71%	0.00%	18.01%
Other Asia	0.09%	0.19%	0.00%	3.08%
Pacific Islands	0.01%	0.03%	0.00%	1.71%
Palestine Syria	0.32%	1.03%	0.00%	16.14%
Poland	6.81%	7.54%	0.00%	78.19%
Portugal	0.46%	1.88%	0.00%	18.82%
Russia	8.40%	7.06%	0.00%	71.83%
Scotland	2.62%	2.02%	0.05%	44.49%
Spain	0.29%	1.52%	0.00%	24.06%
Sweden	4.11%	7.00%	0.00%	71.64%
Switzerland	0.96%	1.09%	0.00%	9.27%
Syria	0.31%	0.92%	0.00%	15.72%
Turkey Bulgaria Romania	0.66%	1.09%	0.00%	16.93%
Wales	0.71%	1.60%	0.00%	26.78%
West Indies	0.28%	2.08%	0.00%	71.70%
Yugoslavia	0.72%	1.98%	0.00%	23.65%

A1.1: Summary Statistics Historical City Expenditures

Variable	N	Mean	Std. Dev.	Min	Max
Expenditures Per Capita (logged)	1,397	6.165	0.512	4.075	8.936
Density	1,397	11.993	8.870	0.747	79.009
Population (logged)	1,397	11.401	0.944	9.333	15.792
% Nonwhite	1,116	0.107	0.128	-0.031	0.558
% Homeowners	1,111	0.377	0.100	0.100	0.697
Foreign born diversity	1,057	0.834	0.089	0.233	0.938
Assessed Value (millions)	1,397	2.442	10.024	0.005	199.837
% Professionals	1,084	0.083	0.031	0.016	0.257

Figure A1.1: Relationship between City Level Entropy and % White



Chapter 2

Table A2.1: Summary Statistics Zoning Ordinances

Variable	Obs	Mean	Std. Dev	Min	Max
Zoning Ordinance	4,293	0.032	0.175	0.000	1.000
Expenditure $ Per Capita (logged)	4,293	3.346	0.413	1.305	6.165
Property Taxes $ Per Capita	4,293	19.798	8.045	1.794	66.837
Presidential turnout	4,293	0.514	0.177	0.013	0.991
Republican Vote Share	4,293	0.471	0.171	0.000	0.838
Midwest	4,293	0.314	0.464	0.000	1.000
North	4,293	0.422	0.494	0.000	1.000
South	4,293	0.195	0.396	0.000	1.000
West	4,293	0.070	0.255	0.000	1.000
% For. Born White	3,740	0.182	0.116	0.006	0.603
% For. Born Non White	3,740	0.005	0.024	0.000	0.398
% Black	3,654	0.081	0.125	0.000	0.557
Highways $ Per Capita	4,265	2.379	1.027	0.230	8.014
Health $ Per Capita	4,288	0.411	0.328	0.015	3.525
Fire $ Per Capita	4,293	2.148	0.815	0.364	10.945
Density	4,283	11.732	8.414	0.747	79.009
% Renters	3,577	0.628	0.101	0.303	0.903
% Employed in Manufacturing	3,554	0.533	0.137	0.109	0.838
% Employed in Agriculture	3,554	0.017	0.043	0.002	0.767
10 year population growth rate	3,592	0.327	0.410	-0.867	5.397
School segregation	4,293	0.223	0.412	0.000	1.000
% Unemployed	3,554	0.635	0.064	0.000	0.820

Chapter 3

Table A3.1: Summary Statistics Sewer Extensions, Historical Urban Ecological Dataset

Variable	Obs	Mean	Std. Dev	Min	Max
New Segments Since Last Census	541	37.20	138.45	0.00	1476.00
Total New Segments Since Last Census	541	1237.02	1953.43	0.00	5933.00
Total Segments in Ward	541	857.72	952.77	181.00	8375.00
% Segments Built	541	0.64	0.25	0.00	0.96
% Foreign Born	541	0.25	0.12	0.01	0.64
% Renters	271	0.74	0.13	0.34	0.98
Renter Segregation	541	0.09	0.03	0.04	0.14
% Black	541	0.08	0.14	0.00	0.95
Racial Segregation	541	0.47	0.16	0.29	0.86

Table A3.2: Summary Statistics: Public Sewer Connections

Variable	Obs	Mean	Std. Dev	Min	Max
% Public Sewer in Tract	146,102	0.773	0.328	0.000	1.000
% Nonwhite	146,102	0.203	0.280	0.000	1.000
Racial Segregation	146,102	0.216	0.197	0.000	0.915
% Renters	146,102	0.356	0.238	0.000	1.000
Renter Segregation	146,102	0.115	0.086	0.000	0.786
% Wealthy	146,102	0.183	0.155	0.000	1.000
City Population	146,102	392911	686109	59	3480384
City Public Sewer Connections	146,102	139100	261531	0.000	1269144
Midwest	146,102	0.234	0.423	0.000	1.000
South	146,102	0.307	0.461	0.000	1.000
West	146,102	0.229	0.421	0.000	1.000

Chapter 4

Table A4.1: Summary Statistics: Urban Renewal Applications and Disbursement

Variable	Obs	Mean	Std. Dev.	Min	Max
Racial Segregation, 1980	172	0.299	0.158	0.015	0.671
Renter Segregation, 1980	172	0.139	0.053	0.014	0.284
Urban Renewal Funds Approved, $100 million	173	0.466	0.734	0.000	5.481
Urban Renewal Funds Disbursed, $100 million	173	0.315	0.536	0.000	4.165
Segregation, 1950	173	0.398	0.153	0.095	0.908
% Owner occupied, 1950	173	47.127	11.692	12.400	70.700
Median Home Value, 1950 (log)	173	9.0	0.3	8.4	9.9
% Dilapidated, 1950	172	6.7	4.9	0.5	26.1
% Built Pre-1920, 1950	172	56.8	17.6	6.1	94.6
% Units w/o Plumbing, 1950	172	22.4	12.5	2.8	62.4
Population (millions), 1950	173	277794.0	702673.5	38946.0	7891957.0
% Nonwhite, 1950	173	11.7	11.9	0.1	44.0
% Employed Manufacturing, 1950	173	31.2	13.7	6.6	64.9
% Employed, 1950	173	94.6	1.9	88.3	98.0
Median Education, 1950	173	10.1	1.2	7.9	12.7
Family Income, 1950 (log)	173	8.1	0.1	7.6	8.6
% Incomes Below $2000, 1950	173	21.4	7.5	10.0	48.8
% Housing Operations	170	0.017	0.020	0.000	0.115
Public Housing Units Per Capita	173	1104.9	802.8	0.0	3819.0

Table A4.2 Summary Statistics Open Housing Initiative Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Opposed to Fair Housing	4,860	0.630	0.483	0	1
Democratic Presidential Voter	4,860	0.591	0.492	0	1
Home Owner	4,860	0.712	0.453	0	1
Education Level	4,860	3.305	1.365	1	6
Age	4,860	3.021	1.535	1	6
Economic Level	4,860	5.007	1.755	1	10
White	4,860	0.933	0.250	0	1
Union Member	4,860	0.305	0.461	0	1

Chapter 5

Table A5.1: Summary Statistics Segregation Across Cities

Variable	Obs	Mean	Std. Dev.	Min	Max
Across-City Share of Racial Segregation	618	0.4080	0.1799	0.0000	0.8793
Across-City Share of Renter Segregation	618	0.3501	0.1481	0.0000	0.8021
Across-City Share of Wealthy Segregation	618	0.2909	0.1737	0.0000	0.7650
Minority Mayor	618	0.2751	0.4469	0.0000	1.0000
Direct General Expenditure Per Capita	618	1.3443	0.9529	0.3131	9.9550
% Spent on Policing	618	0.1408	0.0511	0.0393	0.3244
Crime Rate	618	0.0917	0.0426	0.0000	0.4194
Population (logged)	618	12.0515	0.9916	9.8635	15.1231

Chapter 6

Table A6.1: Summary Statistics Racial Polarization Data

Variable	Obs	Mean	Std. Dev.	Min	Max
Largest Racial Divide	91	0.481	0.213	0.016	0.934
H Index – multi-group	91	0.376	0.119	0.183	0.635
H Index – two-group	91	0.353	0.114	0.156	0.614
Diversity	91	0.623	0.088	0.323	0.736
% Asian	91	0.067	0.074	0.008	0.318
% Black	91	0.275	0.181	0.030	0.815
% Latino	91	0.229	0.155	0.009	0.605
Median HH Income	91	36725	10114	17268	75982
% Renters	91	0.535	0.092	0.368	0.718
% College Ed	91	0.167	0.056	0.049	0.359
Biracial contest	91	0.725	0.449	0	1
Nonpartisan Election	91	0.714	0.454	0	1
Primary Election	91	0.352	0.480	0	1
Population (logged)	91	14.166	0.826	13.065	15.921
White Ideology	86	3.835	0.648	2.667	5.250

Table A6.2: Cities included in Racial Polarization Data

	Segregation		Largest Racial Divide, Number of Elections		
City Name	Mean H Index Multi-Group	Mean H Index Two-Group	Black/White	Latino/White	Black/Latino
Austin, TX	0.204	0.208	1		
Baltimore, MD	0.510	0.516	3	1	
Charlotte, NC	0.269	0.287	2		
Chicago, IL	0.572	0.460	7		1
Cleveland, OH	0.558	0.531	2		
Columbus, OH	0.316	0.284	3		1
Dallas, TX	0.359	0.339	4		1
Denver, CO	0.289	0.254	1	2	
Detroit, MI	0.398	0.255	1		1
Houston, TX	0.339	0.308	7		2
Indianapolis, IN	0.292	0.293			1
Jacksonville, FL	0.233	0.222	2		
Los Angeles, CA	0.351	0.366	3		5
Memphis, TN	0.470	0.474	2		
Milwaukee, WI	0.423	0.360	3		
New York, NY	0.468	0.474	5	3	1
Oklahoma, OK	0.231	0.165	1		
Philadelphia, PA	0.492	0.487	5		
Phoenix, AZ	0.255	0.270		1	
San Antonio, TX	0.237	0.225		4	
San Diego, CA	0.255	0.266	3		1
San Francisco, CA	0.223	0.161	3		1
San Jose, CA	0.186	0.198		2	1
Tucson, AZ	0.185	0.192	1		
Washington, DC	0.464	0.491	3		

Table A6.3: Summary Statistics Census of Government Finance and Population

Variable	Obs	Mean	SD	Min	Max
Direct General Expend per cap	16,831	1.332	1.304	0.022	78.010
Highways per cap	16,642	0.090	0.060	0.000	1.225
Parks per cap	16,673	0.209	0.109	0.000	1.746
Police per cap	15,809	0.069	0.073	0.000	2.564
Sewers per cap	13,832	0.106	0.089	0.000	1.762
Welfare, Health & Housing per cap	13,203	0.066	0.156	0.000	6.321
Own Source Revenue per cap	16,830	1.065	1.174	0.020	84.284
Two-Group H Index	16,831	0.074	0.094	0.000	0.767
Diversity	16,831	0.321	0.190	0.005	0.778
% Black	16,831	0.099	0.153	0.000	0.980
% Asian	16,831	0.034	0.057	0.000	0.674
% Latino	16,831	0.111	0.165	0.000	0.987
5 yr Δ % Black	14,284	0.007	0.019	-0.101	0.229
5 yr Δ % Latino	14,284	0.016	0.020	-0.171	0.207
5 yr Δ % Asian	14,284	0.005	0.011	-0.056	0.128
Median income	16,831	60112	24654	17320	266887
% Local Gov Employees	16,831	3.364	0.992	0.302	11.606
% Renters	16,831	0.358	0.140	0.009	0.911
% Over 65	16,831	0.127	0.051	0.007	0.798
% College degree	16,831	0.167	0.103	0.003	0.618
Population (logged)	16,831	10.107	1.030	6.071	15.921
City Ideology	2,524	4.028	0.788	1.000	7.000
Population	16,831	52940	205791	433	8214426

Table A6.4: First Stage Regression of Segregation on Waterways and Population

	Direct General Expenditure		
	β	SE	P>|t|
# Waterways	0.005	0.00	0.00
Population(logged)	0.028	0.00	0.00
Lagged DV	0.000	0.00	0.00
Diversity	0.085	0.00	0.00
% Black	0.137	0.00	0.00
% Asian	-0.209	0.01	0.00
% Latino	0.001	0.00	0.69
Median Income (1000s)	0.000	0.00	0.00
% Local Gov. Employees	-0.001	0.00	0.01
% Renters	0.011	0.00	0.00
% Over 65	0.255	0.01	0.00
% College Grad	-0.003	0.01	0.66
Constant	-0.271	0.00	0.00
N	25,669		

Note: First stage of two stage least squares regressions with fixed effects for regions and year (not shown); Instrumented: Two-group H Index of segregation; Excluded Instruments: # of Waterways, Population logged

Table A6.5: Summary Statistics Sewer Overflows, EPA

Variable	Obs	Mean	SD	Min	Max
Logged Overflows per capita	1,417	0.508	1.353	0.000	25.548
Racial Segregation	1,417	0.028	0.060	0.000	0.559
Population (logged)	1,417	8.414	1.701	3.091	15.122
% Renters	1,417	0.324	0.124	0.000	0.796
% Urban	1,417	0.609	0.467	0.000	1.000
% Black	1,417	0.086	0.164	0.000	0.978
% Asian	1,417	0.012	0.025	0.000	0.314
% Latino	1,417	0.053	0.092	0.000	0.884
Median Income (1000s)	1,417	37623	14287	13516	190805
Subventions Per Capita (1000s)	1,417	391.648	1397.263	0.000	50670.790

Chapter 7

Table A7.1 Summary Statistics: Democratic Vote Share, 2008, Harvard Elections Database Archive

Variable	Obs	Mean	Std. Dev.	Min	Max
% Democratic Vote, 2008	44,958	0.623	0.200	0.054	1.000
Tract-Metro Difference in % White, 1970	44,958	0.019	0.216	-0.939	0.553
% White 2000	44,958	0.637	0.320	0.000	1.000
% Renters 2000	44,958	0.377	0.249	0.000	1.000
% Wealthy 2000	44,958	0.167	0.159	0.000	1.000
Density	44,958	0.003	0.005	0.000	0.089
Midwest	44,958	0.241	0.427	0.000	1.000
South	44,958	0.298	0.458	0.000	1.000
West	44,958	0.226	0.418	0.000	1.000
Proportional Tract-Metro Elevation Diff.	44,956	-0.195	0.556	-1.007	19.336
Waterfront Tract	44,958	0.203	0.402	0.000	1.000
Distance to City Center (logged)	44,958	9.692	1.010	3.643	12.228

Table A7.2 Summary Statistics: Modern Partisanship and Conservatism, General Social Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Partisan Identification	11,674	2.680	1.953	0.000	6.000
Political Ideology	9,376	4.039	1.419	1.000	7.000
Republican Pres. Vote	10,804	0.334	0.472	0.000	1.000
Tract-Metro Difference in % White, 1970	11,674	0.039	0.182	-0.863	0.342
White, non-Hispanic	11,674	0.689	0.463	0.000	1.000
Ago	11,674	46	17	18	89
Education	11,674	1.624	1.213	0.000	4.000
Female	11,674	0.555	0.497	0.000	1.000
Kids at home	11,674	0.617	1.049	0.000	8.000
Married	11,674	0.457	0.498	0.000	1.000
Income	11,674	51987	42442	407	178266
Mover	10,640	0.617	0.486	0.000	1.000
% White Tract	11,674	0.649	0.296	0.000	0.994
% Homeowners Tract	11,674	0.617	0.247	0.000	0.995

ATTACHMENT TO LETTER 46

Segregation by Design

By Jessica Trounstine
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Abstract:
Over the course of the 20th century the spatial scale of residential segregation along race and class lines increased. In the late 1800s, whites and people of color, renters and owners, poor and wealthy, were separated from each other in small clusters, so that residential segregation occurred block-to-block. By the middle of the 20th century segregation patterns had transformed; residents became segregated neighborhood-to-neighborhood. Throughout the post-war period, segregation between whole cities rose as the nation suburbanized. In recent decades, city-to-city segregation has remained remarkably persistent despite increasing neighborhood integration. Because political representation is geographically determined, these changing patterns have had profound political consequences – generating opportunities for exclusion and increasing polarization. I argue that local governments have been instrumental in driving and shaping these patterns; and they have done so largely in the name of protecting both property values and exclusive access to public goods for white property owners. When property values and public goods exclusivity were threatened, property owners changed their tactics – shifting the spatial of segregation higher. This process has always been Segregation by Design.

Conventional wisdom holds that segregation and the resulting deficit in services that the poor and people of color experience in American cities is driven by a combination of individual racial prejudices, market logic, and federal policy. This is an insufficient account because it ignores the institutional setting in which racism, economics, and federal law are embedded. Local politics structures the way in which *all* of these forces unfold.

Using qualitative historical evidence from large cities throughout the United States and quantitative data from hundreds of cities, I demonstrate that segregation and the unequal distribution of public goods accruing to individuals and neighborhoods are a function of local policies and political battles. Land-use planning, zoning, and redevelopment have been utilized by white homeowners and businesses seeking to enhance property values and monopolize public goods to generate segregation and inequality in access to benefits for over 100 years.

The changing spatial patterns of segregation have had important implications for political representation. Poor and minority residents have become more isolated and less able to secure political responsiveness and public benefits. In turn, segregation affects both local and national politics. In cities, segregated communities are more polarized and less willing to fund public goods. At the national level, neighborhoods that successfully resisted integration during the civil rights era are markedly more conservative today.

Instead of receding, segregation within cities and between cities and suburbs has grown over the past several decades, further antagonizing the imbalance of public benefits between the haves and the have-nots.

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Introduction

"Segregated people in a nation that professes to be a democracy soon become a frustrated people. Those who segregate others soon become frightened, insecure people forced to accept and invent prejudice to justify their actions" Robert C. Weaver, *The Negro Ghetto*, 1948

City services sustain, prolong, and even save lives. In the latter half of the 19th century, urban American began a rapid ascent. City populations and economies were booming. But so too were their filth, their disease, and their divisions. By 1900, infectious and parasitic diseases killed nearly 8 in every 1,000 residents; accounting for more than 45% of all deaths (Tippett 2014) and more than 60% of deaths in children (Guyer et al 2000).[1] Between 1900 and 1940, the overall mortality rate in the United States declined by 35%[2] (Linder and Grove 1947) and the infectious disease mortality rate declined by 75% (CDC 1999).[3] In some cities in 1900, 30% of babies would not live to celebrate their first birthday (Meckel 1990). Estimates indicate that between one quarter and one half the decline in total mortality can be attributed to the development of public water and sewer systems. Local public works significantly reduced outbreaks of diseases like cholera, typhoid fever, diarrheal diseases, and malaria (Cutler and Miller 2006, Troesken 2004).[4] Over time, the growth of municipal fire and police forces, street cleaning and refuse disposal, childhood vaccination and physical examination programs, regulation of food supplies (e.g. requirements for milk pasteurization), and the implementation of

[1] Pediatrics. 2000 Dec;106(6):1307-17. Annual summary of vital statistics: trends in the health of Americans during the 20th century. Guyer B1, Freedman MA, Strobino DM, Sondik EJ.
[2] Total mortality declined from 17 per 1,000 persons to 11 per 1,000 persons.
[3] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4829a1.htm#fig1
[4] It is important to note that the dramatic improvement in mortality from water and sewer systems required the development of filtration and treatment techniques, which were not immediately available when the systems were first built.

building codes all worked to prolong life expectancy (Condran and Cheney 1982, Haines 2001, CDC 1999).

However, such benefits were neither inevitable nor universal. From the beginning poor and minority neighborhoods received fewer and lower quality services: they were less likely to be connected to sewers, have graded and paved streets, or benefit from disease mitigation programs.[5] Today, the quality of public goods in the United States remains highly variable. Some people have access to well-paved and plowed roads, sewers that never overflow, public parks with swing sets and restrooms, adequately staffed police and fire forces, and clean water. Others do not have access to these resources. The quality of such services is largely a function of the neighborhood, city, and state in which a person resides. The degree to which the poor and people of color have been concentrated into identifiable residential locations (e.g. segregation), varies from place and to place, and everywhere has changed dramatically over time.

Over the course of the 20th century the spatial scale of residential segregation along race and class lines increased (Logan et al 2015, Reardon et al 2009, Lee et al 2008). In the late 1800s, whites and people of color, renters and owners, poor and wealthy, were separated from each other in small clusters, so that residential segregation occurred block-to-block. By the middle of the 20th century segregation patterns had transformed; residents became segregated neighborhood-to-neighborhood. Throughout the post-war period, segregation between whole cities rose as the nation suburbanized. In recent decades, city-to-city segregation has remained remarkably persistent despite increasing neighborhood integration. Because political representation is geographically determined, these changing patterns have had profound political

[5] This book explores race and class divisions in local politics and residential locations. There are many ways one might go about defining these groups. As explained in more detail in Chapter 1, I focus on divisions between whites and nonwhites, and homeowners and renters. I use the terms minority and nonwhite interchangeably. I also use the terms black and African American interchangeably.

consequences – generating opportunities for exclusion and increasing polarization. I argue that local governments have been instrumental in driving and shaping these patterns; and they have done so largely in the name of protecting both property values and exclusive access to public goods for white property owners. When property values and public goods exclusivity were threatened, property owners changed their tactics – shifting the spatial of segregation higher. This process has always been Segregation by Design.

An example from Southern New Jersey is illustrative. Camden and Cherry Hill, New Jersey are similarly sized cities, just across the Delaware River from Philadelphia. Camden is home to two superfund (toxic waste) sites; Cherry Hill is home to none.[6] In Camden only 1.7% of state roads had good pavement in 2004[7] compared to 35% in Cherry Hill.[8] Camden has 22 combined sewer overflow outfalls (where raw sewage and storm water may be released to the surface during wet weather), while Cherry Hill has zero. Camden offers no e-waste recycling and no yard waste collection; Cherry Hill provides both. In 2012, Camden's water supply ran so low that residents were required to boil water for consumption and were prohibited from watering their gardens.[9] In contrast, Cherry Hill has a clean, plentiful water supply. The Cherry Hill Public Library has more than 400,000 circulating materials, more than 300 adult programs and classes, and 67 public computers.[10] In 2011, Camden shuttered the doors of its main library and handed control of the remaining two small branches to the county.[11] Cherry Hill offers 63 recreational facilities (parks, art centers, tennis courts, etc.) for its residents and supports 13

[6] https://www.epa.gov/superfund/search-superfund-sites-where-you-live
[7] http://www.state.nj.us/transportation/works/njchoices/pdf/camden.pdf
[8] Personal communication with New Jersey Department of Transportation. The NJDOT provided data from the NJDOT Pavement Management System by email. Available from the author by request.
[9] http://www.nj.com/news/index.ssf/2012/06/camden_residents_advised_to_bo.html
[10] http://www.chplnj.org/about/documents/2015%20Annual%20Report%20-%20FINAL.pdf
[11] http://www.nj.com/news/index.ssf/2011/02/main_branch_of_camden_public_l.html

different swim clubs.[12] Camden has 25 parks and 8 community centers.[13] Between 2007 and 2012, Camden's city budget declined by about $245 per resident, while Cherry Hill's increased by about $12 per capita. Clearly, living in Camden is unlike living in Cherry Hill. So, how did Cherry Hill and Camden get to be so different?

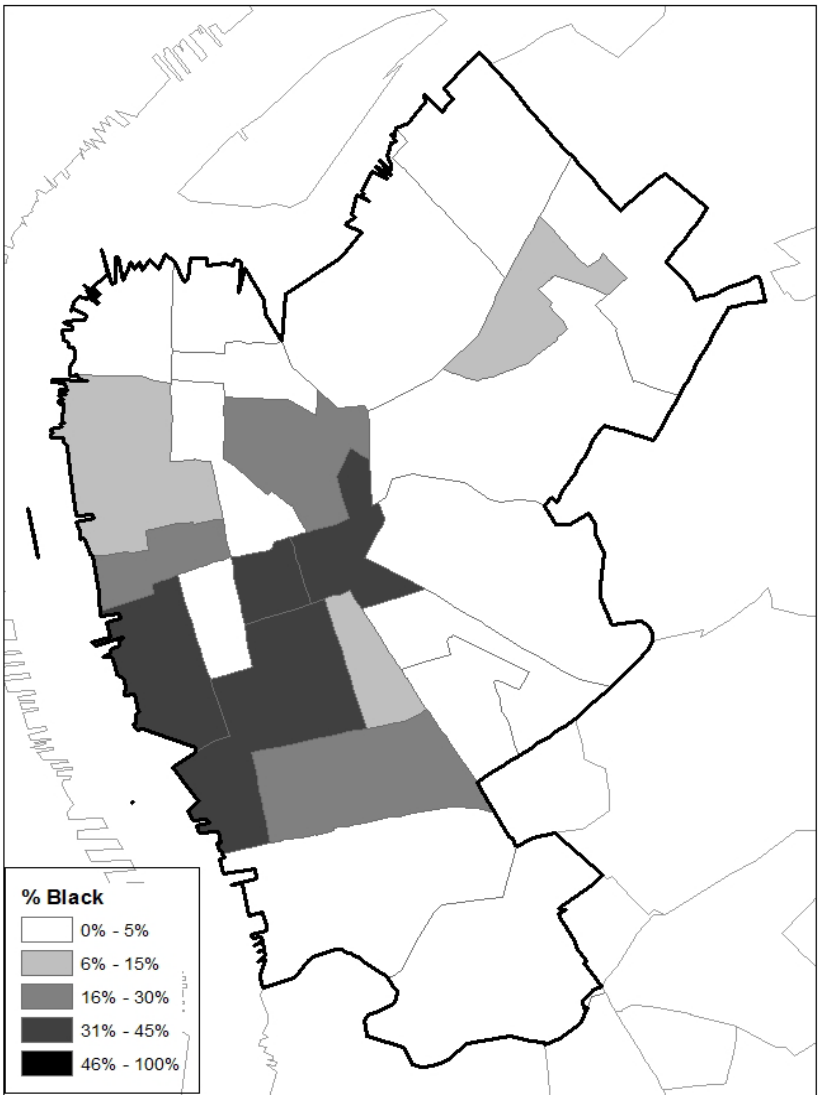
The story begins with a focus on Camden at the turn of the century. Although Cherry Hill was incorporated as a municipality in 1844, it remained a small, undeveloped agricultural community in the first few decades of the 20th century. In 1900, Camden had a population of nearly 76,000 residents. The city boasted 55 miles of sewers, 79 miles of water mains, and about 38% of the city's streets were paved; figures that suggest that Camden's development was right in-line with national averages. Also similar to other cities, were Camden's level of race and class segregation. By the turn of the century, Camden was home to two well-established free black communities named Fettersville and Kaighnsville (Garwood 1999). Established in the 1830s (Fettersville) and 1840s (Kaighnsville), these communities were comprised of small lots affordable to people of modest incomes, many of whom were African American (Garwood 1999). One of Fettersville's neighborhood churches, the Macedonia African Methodist Episcopal Church, was believed to be a stop on the Underground Railroad (Garwood 1999). While the majority of Camden's black residents lived in Fettersville and Kaighnsville, both neighborhoods were predominately populated with white, working-class residents.

According to the 1900 Census, the wards representing Fettersville and Kaighnsville were about a quarter African American. For a city in which African Americans only comprised 8% of the total population, clearly, blacks were not evenly spread across the city. But, the extent and scale of black segregation would increase dramatically by 1940. By 1940, the share of black

[12] http://www.cherryhill-nj.com/Facilities
[13] http://ecode360.com/8508679

residents had increased to 11%, but this growth in the black population was concentrated geographically in the central and southern parts of town. Figure 1 shows that by 1940, the black concentration in parts of Camden exceeded 50%.

Figure 1: Segregation in Camden, 1940



The creation of Camden's segregated neighborhoods echoed the creation of segregated neighborhoods throughout the United States. Camden city government used zoning laws, the placement of segregated schools, and public housing to create and enforce residential segregation between whites and Africans Americans, as well as between renters and homeowners. New Jersey's zoning enabling statute specified that regulations "must be made with reasonable

consideration, among other things…with a view of conserving the value of property," (Cunningham 1965). Camden first authorized zoning in 1928 and like other early zoning adopters, moved quickly to ensure that land use policy was used strategically to protect the interests of white home-owning residents.

By 1930, Camden was a bustling central city. It had more than 118,000 residents and spent nearly $950 (in 2012 dollars) per capita on municipal expenditures – well above the national median. But the stress of the Great Depression left Camden with an enormous burden of vacant and uninhabitable properties (Housing in Camden, 1942)[14]. And, so it was one of the earliest recipients of federal slum clearance and public housing funding in the 1930s (Pommer 1978). In 1938, two buildings were erected – one for whites and one for blacks. When the program was expanded in the 1940s two more projects were built; also segregated. Unsurprisingly, the neighborhoods around each project increasingly came to reflect the race of public housing occupants (Williams 1966a[15]). Later, when Interstate 95 was run through the city, "an attempt [was] made to eliminate the Negro and Puerto Rican ghetto areas" (New Jersey State Attorney General report, quoted in Rose and Mohl 2012, p108).

Overtime, neighborhood segregation in Camden rose; climbing more than 50% in the first half of the 20th Century. As would be the case in cities throughout the United States, Camden's city government underprovided services to its black neighborhoods (Helzner 1968[16], Silvotti 1968[17])

[14] http://www.dvrbs.com/hacc/CamdenNJ-HousingAuthority.htm http://www.dvrbs.com/hacc/CamdenNJ-HousingAuthority.htm
[15] Camden Courier-Post, June 8, 1966
[16] Helzner, Gerald, Camden Courier-Post, March 7 1968, p 13
[17] Silvotti, Bert, Camden Courier-Post, March 18, 1968

Starting around the time of the Second World War, the city faced desegregation pressures on a number of different fronts. In 1881, the state of New Jersey passed a law prohibiting the segregation of schools by race (Wright 1953). But, as of 1944, no black children attended white elementary schools (Jensen 1948). When the NAACP sued the district, officials responded that black parents had simply not requested attendance at their neighborhood schools. So, the NAACP took out ads in the Camden Courier Post to convince parents to do just that. In 1947, hundreds of black children enrolled in previously all-white schools (Wright 1953).

School desegregation was just one of the first of many signs of racial transition in Camden. In 1951, the city witnessed its first biracial contest for city council when Dr. Ulysses S. Wiggins, the president of the Camden NAACP Branch, was nominated on the Republican ticket (Chicago Defender April 21, 1951). He lost, but in 1961, Elijah Perry became the city's first African American city council member (Riordan 1996[18]). In 1954, the New Jersey Supreme Court ordered public housing to be desegregated and the first black families moved into white buildings in 1966 (Williams 1966a, Williams 1966b[19]). And in 1969 and 1971, the city erupted in violent race riots, touched off by police brutality against black and Latino residents.

In 1940, the little hamlet of Cherry Hill had a population just under 6,000 residents; they were 91% white and 9% black.[20] Not only small, the city was economically weak, having defaulted on its bond obligations been placed in receivership by the state government during the Depression (Shay v Delaware 122 N.J.L. 313, 316 (N.J. 1939), Cammarota 2001). But after the war, while housing and schools in Camden were integrating, Cherry Hill's population and economy exploded, as was true of suburbs throughout the nation.

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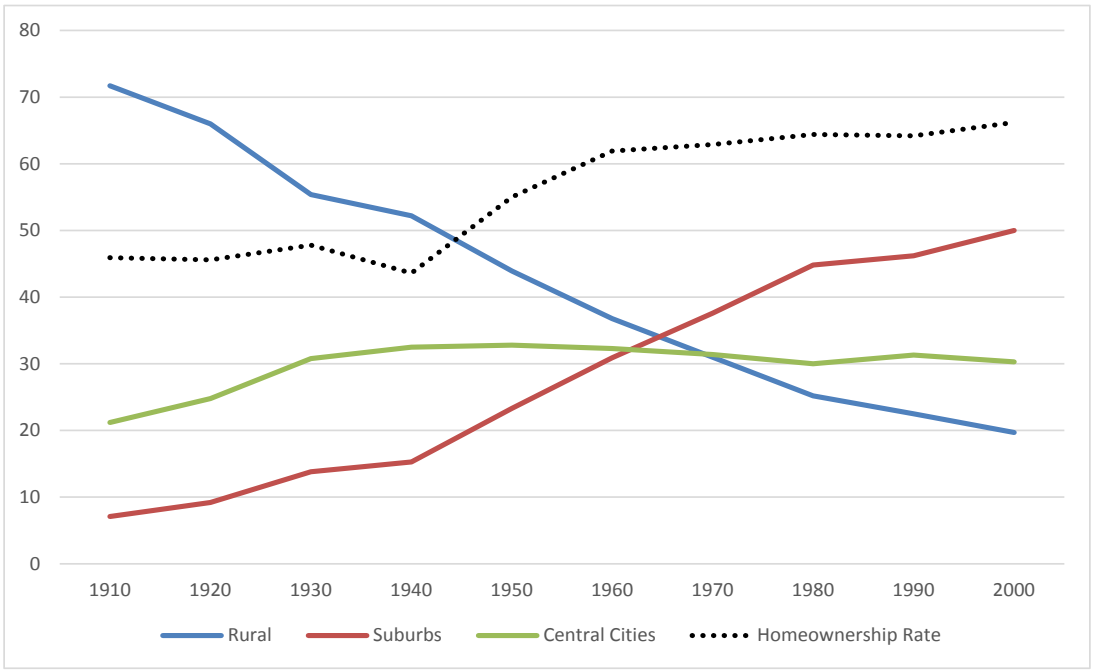
[18] Riordan, Camden Courier Post, February 2, 4B
[19] Camden Courier-Post, June 9, 1966, p17
[20] http://lwd.dol.state.nj.us/labor/lpa/census/2kpub/njsdcp3.pdf; Camden Historical Society scan****

Drawn to places like Cherry Hill by the attractiveness of low-cost federally insured mortgages, the development of new homes and new employment opportunities in outlying communities, and easy commuting along newly built federal highways, the nation suburbanized and white homebuyers moved to the periphery (Jackson 1985). After the war, Cherry Hill witnessed a tenfold increase in 30 years. During the same period, Camden lost 13% of its residents.

Figure 2 shows the share of the total population living in rural areas, central cities, and suburbs over the 20th century. The graph reveals that the pace of suburbanization increased sharply during the postwar period so that by 1970, a plurality of the population lived in suburbs.[21] The homeownership rate increased at the same time. This latter fact is important because it helps to explain the driving force behind exclusionary zoning adopted by suburban communities.

[21] Rural here refers to population outside of any metropolitan area. A suburb is an area inside of a metropolitan area, but outside of the central city. City refers to the central cities of metro areas. https://www.census.gov/prod/2002pubs/censr-4.pdf p33; https://www.census.gov/hhes/www/housing/census/historic/owner.html

Figure 2: Share of Total U.S. Population Living in Different Types of Places

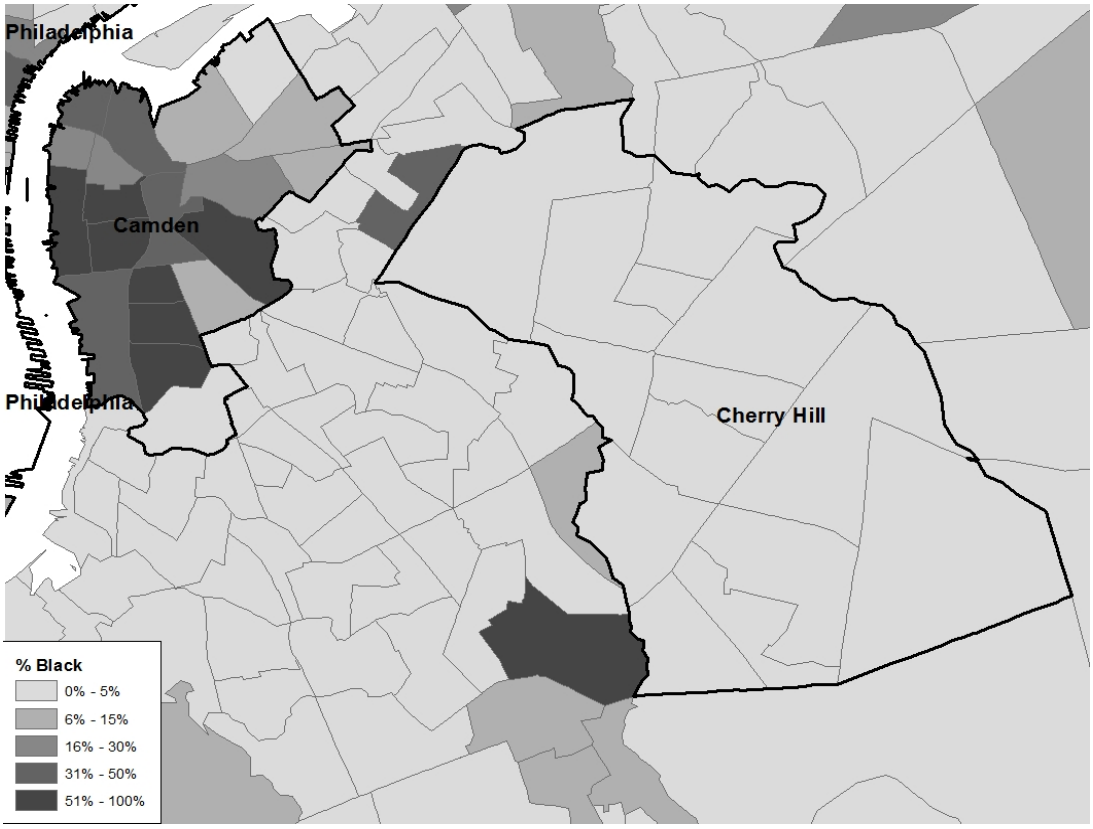


As Camden rushed to utilize more than $30 million in federal redevelopment funds to revitalize its flagging urban center, Cherry Hill was busy implementing zoning restrictions that effectively prohibited the development of low-or even moderate-income housing (Cammarota 2001). In 1975, black residents of Mount Laurel, New Jersey (a suburb close to Cherry Hill both geographically and demographically) along with several local chapters of the National Association for the Advancement of Colored People (NAACP), won a class action lawsuit challenging Cherry Hill's type of exclusionary zoning. As a direct result of this decision, Cherry Hill was required by the state to zone for thousands of low-income housing units. The city declined to do so. As of 2015, Cherry Hill continued to face litigation for its failure to zone for

affordable housing.[22] As is true in many places throughout the United States, exclusionary economic zoning cannot be disentangled from race. One activist argued "many residents carried racist feelings about affordable housing, fearing it would attract poor blacks and Hispanics."[23]

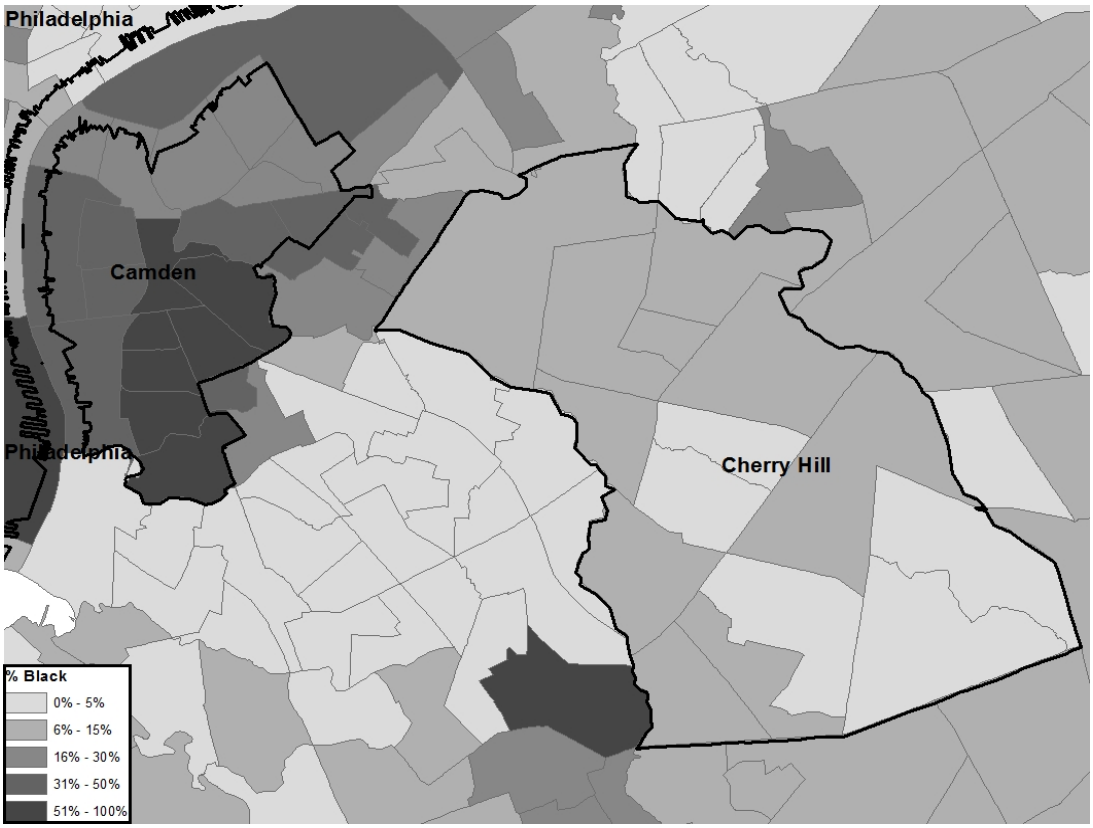
Figures 3 and 4 reveal how segregation between Camden and Cherry Hill changed between 1970 and 2010.

Figure 3: Segregation in Camden and Cherry Hill, 1970



[22] http://www.cherryhill-nj.com/DocumentCenter/View/2562, page 8;
[23] http://articles.philly.com/1989-09-10/news/26101167_1_bloat-prosperity-sewers-and-roads

Figure 4: Segregation in Camden and Cherry Hill, 2010



In 1960 Camden was 76% white; and the maps show that in 1970, although home to many more people of color than was true in 1940, Camden still had several exclusive white neighborhoods. These white neighborhoods had all completely disappeared by 2010. So, even though Cherry Hill diversified to a limited extent, a greater share of segregation occurs between these cities than within them.

Those who left Camden during the postwar period and those who moved to Cherry Hill were largely white, middle-and upper-class. As of 2014, about 39% of Camden's population owned their homes, 5% were white, and the annual median household income was $26,000. In Cherry Hill, 80% owned their homes, 75% were white, and the median household income was

$89,500.[24] In 2012, per capita taxes in Cherry Hill were double Camden's. Camden simply cannot afford to offer the services that Cherry Hill provides. The segregation along race and class lines between these two cities, and the resulting inequality in access to public goods was produced by public policy. It is a pattern that was replicated many times over throughout the United States; a postwar version of similar patterns that had developed at the turn of the 20th century.

A Theory of Segregation by Design

In the late 1800s as industrialization brought thousands of migrants and immigrants into cities, people of color and the poor were spatially isolated, not by ward or census tract, but by building and street (Logan et al 2015). What this means is that although blacks, Latinos, and Chinese residents were unlikely to live next door to white homeowners, they *were* quite likely to live down the street. By 1940, segregation shifted up to the neighborhood level (Cutler et al, Massey and Denton), so that large swaths of many cities had become predominately black or white, and both poor and wealthy residents became increasingly clustered in most places. By the onset of the Second World War, every large city in America had parts of town where people of color lived, and parts of town where the poor lived. Sometimes, but not always, these neighborhoods overlapped. Race and class segregation both increased by more than 50% between 1900 and 1940. These concentrating trends continued at a slower pace throughout the postwar period until 1970, when both race and class neighborhood segregation peaked. Neighborhood segregation by race has declined since 1970, but segregation by class has

[24] http://www.census.gov/quickfacts/table/PST045215/3410000,3400712280,00

increased.[25] During the post-war period segregation between cities increased and has remained stable since that time (Massey and Hajnal 1995, Farrell 2008, Fischer et al 2004).

Two classic economic models of individual choice appear to predict these different patterns of segregation. Thomas Schelling (1971) argued that extreme racial segregation could result from individual decisions about where to live, given even mild preferences for having neighbors of the same race. Only a small number of racially intolerant white residents can cause a neighborhood to rapidly transition because as each intolerant white resident is replaced with a black neighbor, whites with lower and lower levels of intolerance choose to leave, creating neighborhood-to-neighborhood segregation. The second individual choice model predicts city-to-city segregation. Charles Tiebout (1956) proposed that residents with similar preferences for taxation and public goods provision should sort themselves into cities with like-minded neighbors. To the extent that heterogenous preferences for tax and spending levels (or ability to pay) overlap with heterogenous demographics, they will also generate segregation.[26]

The trouble is that both theories are subject to instability in the absence of collective enforcement mechanisms (Oates 1969, Oates 1981, Fischel 1992). That is, for an individual to ensure that her neighborhood remains white and has access to a nice public park, she needs the cooperation of her neighbors. But, neighbors may have individual incentives that undermine the achievement of other residents' collective goals. For instance, it can be extremely lucrative for a white homeowner to sell her home to a black buyer. This is especially likely to be the case when black housing options are restricted and when the black population is expanding. As Hamilton

[25] The precise pattern of class segregation depends on the measures used to indicate class. Income segregation has increased significantly since the 1970s (although remains lower than racial segregation), while homeowner/renter segregation has increased by a smaller amount.

[26] Banzhaf and Walsh combine Schelling and Tiebout's insights into a single model that establishes that preferences over public goods and demographics are mutually reinforcing in the generation of segregation (2010).

(1975) explained, individual incentives can also undermine the Tiebout model. It also makes fiscal sense for a resident who prefers high quality public goods, but is unable to afford high tax rates, to locate the smallest, least expensive home in a wealthy city. The taxes this resident pays do not support the share of the public goods she utilizes, but she benefits from them nonetheless. In Hamilton's tale, this behavior could lead to wealthy residents chasing each other around to try and maintain exclusivity. In the first instance, the collective goal of maintaining the white neighborhood is undermined by sellers seeking the highest sale price. In the second instance, the provision of public goods is undermined by residents who do not pay the full cost.

Governments can promote collective action by generating enforcement of collective goals; and here it is *local* governments that play the starring role, because they alone regulate land-use. By invoking their powers of control over land-use and making choices about service provision, local governments can affect the aggregate demographic makeup of communities and the spatial distribution of residents and services, thereby generating and enforcing segregation. The goal of these policy choices is stability (or enhancement) of property values and the protection of public goods quality.

As North (1990) explains, the relative bargaining strength of different interests in any community will dictate the structure of its rules. Such rules, he tells us, are frequently devised in to promote private rather than public interests (p48). The history of local land-use planning and service provision fits squarely within this theoretical perspective. Property owners (and those who derive their livelihood from property, like realtors and lenders)[27], seek both property value appreciation and protection from losses in value. Because tax levels, service quality, and

[27] Developers, while also obviously earning their livelihood through property only sometimes have goals that are aligned with homeowners'. In some settings, developers prefer fewer regulations on development (allowing them to build smaller homes on smaller lots or denser multifamily structures, for example), but in others they are strong proponents of restrictive mechanisms like large lot zoning and racial covenants.

neighborhood demographics are capitalized in property values (see Hilber 2011 for a review), property owners invest considerable energy into dictating local policy (Fischel 2001, Stone 1989; Logan and Molotch 1978).

In the United States, property owners have always been disproportionately white; and property value has been tied to the race of occupants and neighbors (Hayward 2013, Freund 2007). Furthermore, as Bradford, Malt, and Oates (1969) argued, the quality of many public goods, like education and public safety, is predominantly affected by the characteristics of the residents themselves rather than inputs from the government. Together these circumstances have given property owners a powerful incentive to regulate who lives where since the very earliest years of urbanization. In particular, white property owners have long been concerned with excluding certain types of people from their communities.

From the earliest years of city development, white, native-born Americans had a racialized, classist understanding of property value and deservingness of public benefits. In particular, it was widely accepted that poor and minority neighbors negatively impacted property values and were less deserving of benefits than property owners and whites. Local policies like zoning and redevelopment serve these ends, and the result has been segregation along race and class lines.

The very first laws generating segregation were adopted in the first decade of the 20th century, to protect both property values and public goods exclusivity. Over the course of the next 100 years, when property owners were stymied in their attempts to create exclusivity by demographic shifts, loss of political control, or meddlesome higher levels of government seeking to promote equality, they adopted new strategies to achieve segregation, often increasing the spatial scale of exclusivity to achieve their goals. For instance, when first industrialization and

then the explosion of war time economies pulled great numbers of working class people of color to cities, many black and Latino neighborhoods swelled, threatening to spill into white, home-owner communities. City governments were called upon to use policy levers like land use regulations, zoning, the placement of thoroughfares and public housing to consolidate, and then circumscribe minority communities. When state and federal courts ordered desegregation of communal spaces like parks, golf courses, and swimming pools, local governments again used control over land use to alter the residential map. In the post-war period, big city governments became unreliable allies in this pursuit. When the federal court ordered desegregation of schools and when white owners saw threats to their political power in central cities, they ensured that suburban governments protected their interests.

The Geography of Inequality

Political geography is comprised of nested units: neighborhoods within wards, wards within cities, cities within states, and states within the nation. When residential segregation maps onto political geography, political divisions become fused with race and class divisions. This has two important consequences. First, segregation generates inequalities between race and class groups because in a world of scarce resources, the politically powerful deny public goods to those who are politically weak. Segregation within cities and suburbanization across city lines has meant that the benefits experienced by racial and ethnic minorities and low-income individuals are inferior to the benefits experienced by whites and the wealthy. Second, segregation generates political polarization between race and class groups and ultimately, inhibits cooperation.

Segregation generates inequalities because it allows political elites to target public goods toward supporters. At one time, public goods were segregated directly, through laws which

dictated that whites and blacks (and often Native Americans, Latinos, and Asians) could not attend the same schools, sit in the same area on public transportation, utilize the same parks, pools, libraries, or hospitals, be incarcerated in the same facility, or be buried in the same public cemeteries.[28] The legal segregation of public goods allowed city, county, and state governments to provide unequal funding for black and white schools, black and white hospitals, and black and white playgrounds (thereby generating unequal quality). This meant that compared to whites, blacks received inferior public goods than whites regardless of where they lived. But by the middle of the 20th century, public goods inequalities had largely come to be determined by residential segregation instead of directly. [29]

This transformation occurred in part as a response to the 1896 decision *Plessy v. Ferguson* which dictated equality in separate facilities. It was cumbersome and expensive to develop separate and equal services in diverse communities. The duplication of schools, parks, hospitals and cemeteries for black (Asian, Latino, and Native American) and white residents meant higher expenses (CQ Researcher 1947).[30] Such costs arose not only from the establishment of facilities that would not have been needed if the facilities were integrated, but also from the loss of efficiency that the replication of equipment and personnel entailed.[31] Obviously, these costs were minimized when nonwhite facilities were severely underfunded

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[28] Jim Crow laws demanded or permitted segregation in settings far beyond the reach of public goods including everything from seating in theaters and circuses, to marriage and sex, to the playing of checkers or dominos in private homes (Woodward 1955). Furthermore, laws mandating segregation were but one way in which the rights of racial and ethnic minorities were violated during this period. For instance, various laws barred minority individuals from testifying on juries against white defendants, denied them citizenship status, prohibited their access to certain professions, excluded them from owning land, and of course, prevented them from voting.

[29] The choice between segregating public goods directly and segregating public goods via residential segregation was not confined to the South. Leon Litwack (1961) writes of the antebellum north "legal and extralegal discrimination restricted Northern Negroes in virtually every phase of existence," (p64). More details on Jim Crow segregation in the north are provided in Chapter 3.

[30] http://library.cqpress.com/cqresearcher/document.php?id=cqresrre1947110700

[31] One study of St Louis's segregated school system found that 75% of the city's transportation costs in 1951-52 were spent transporting Negro school children who lived in outlying areas to colored schools in the center of the city (Russell 1954).

(Myrdal 1944, p342), but in the wake of *Plessy v. Ferguson* and successive lawsuits urging cities toward equal (albeit separate) facilities, residential segregation became an attractive alternative. After the many midcentury court decisions striking down any separate facilities (e.g. Brown v. Board of Education), residential segregation became the only remaining option (CQ Researcher 1947, Kruse 2005). In addition to being constitutional, residential segregation was also an efficient mechanism for producing inequalities across multiple public goods at once.

A similar transformation occurred in the post-war period, as neighborhood level segregation was traded for city level segregation. In 1948, when the Supreme Court ruled restrictive covenants unenforceable in *Shelley v. Kraemer*, white neighborhoods lost one of their most effective means of defense against integration. The 1968 Fair Housing Act further limited white collective action. As technological changes enhanced suburban service delivery and commute possibilities, and as the federal government subsidized homeownership outside of the central city, segregation across city lines rose. Moving outside of city boundaries allowed suburbanites to provide high levels of public goods for their residents without having to pay for services for nonresidents. For the privileged, suburbanization was an even more efficient mechanism of segregation than choosing separate neighborhoods within the city. As Hayward (2009) has argued, suburbs offered the opportunity to, "engage in exclusionary zoning practices…to opt out of supporting public housing…and even opt out of supporting public transportation within the boundaries of their municipalities," all while allowing suburbanites to, "pool their tax monies…to provide schooling and other public services." (p149). In addition to offering efficiency, suburbanization also freed residents from having to fight for control of the city government. Indeed, suburban flight was encouraged by a loss of political power in the central city.

In many ways, these inequalities in access to public goods are precisely the goal of segregation's promoters. But, a second consequence of increasing correspondence between political geography and demographic division, is an increase in political polarization. Within cities, segregation generates stark divides between racial groups, leading segregated cities to underprovide public goods. But, even beyond city borders, segregation is consequential. The process of building and defending white homeowner neighborhoods created new ideological commitments to a meritocratic discourse that depicted inequalities as being the result of the free-market, and choices made by black and poor residents, rather than the result of actions taken by government or white homeowners. The new ideology that was bred in defended white homeowner neighborhoods took root, growing into a modern conservatism that prioritized protection of property, self-reliance, and individual achievement (Self 2003, Lassiter 2006, Kruse 2005). Over the years, this conservatism has persisted, inculcating new neighbors with the same perspective.

Empirical Expectations

The preceding argument generates several broad predictions which I test in various ways throughout the coming chapters. First, I predict that some communities will be more likely to desire segregation than others: these are places that have a taste for segregation and/or have significant resources to protect. These places will be most likely to implement local policies like zoning, urban renewal, and restrictive land use regulations. When communities seeking segregation are thwarted in their ability to generate exclusivity, they'll seek to change the spatial scale of segregation – moving to exclusive neighborhoods and exclusive cities. Second, I predict that these local policies work to generate segregation along race and class lines. Third, I predict that residential segregation generates inequalities in access to public goods. Finally, I propose

that residential segregation will cause political polarization in both local and national politics. No chapter or time period contains tests of all of these predictions; but together they tell a compelling story. For more than 100 years property owners (and those who derive their livelihood from property) have urged local governments to enact policies that institutionalize segregation along race and class lines to protect their property values and control the distribution of public goods; and I show that they have been incredibly successful.

I find that segregation along both race and class lines has been promoted by white homeowners and land oriented businesses for more than 100 years. Where these interests dominated city government, segregation grew more rapidly. I also find that as segregation increased, service investment in white homeowner neighborhoods increased. As whites lost control over the distribution of benefits, they moved to the suburbs and continued to expand service delivery. Today, a greater share of public dollars is spent by suburbs than by central cities. Finally, I reveal that in more segregated places political polarization is greater and poor and minority residents have access to lower quality public goods.

Important Caveats

Schools (or lack thereof)

This is a book about segregation, and only rarely do I engage a discussion of schools. This will seem a glaring omission to many readers, especially because many pieces of my argument overlap with accounts offered by education scholars. The literature exploring inequality of educational opportunities is extremely dense and well developed (see Reardon and Owens 2014 for an overview). As Stephen Macedo writes, "Local control, when combined with local funding, and district-based assignment of pupils to schools, has created a geography marked by stark inequalities centered on class and race: a new form of separate and unequal"

(Macedo 2003, p743 in "School Reform and Equal Opportunity in America's Geography of Inequality"). The arguments that I advance here compliment and underscore much of this research. One might view this book as an extension of these arguments to the provision of *all non-school local public goods*.

My focus here is on the various policies that local governments use to generate segregation; and the consequences of segregation for local and national politics. The vast majority of the governments that I study do not play a direct role in the governance of schools or the provision of public education. That is, most cities in the United States do not spend money on educational services; and most public school students (about 85%) attend schools that are governed by school districts not municipalities. One could approach school district politics as I have done for municipalities – analyzing decisions about the drawing of catchment zones, policies on bussing, and the allocation of resources across schools in the same district. But, this would require vastly different data than what I have gathered.

That said, school enrollment and quality plays a major role in individual decisions about where to live. So while I do not analyze the politics of school districts, my argument attempts to take school dynamics into account when analyzing the impetus for segregation. For instance, I use federal desegregation orders to study how segregation changed in the post-war period.

Data Hurdles

The data that I use to reveal the patterns described above differs in important ways from previous research. Most scholars who analyze the determinants of segregation focus either on metropolitan level segregation (e.g. Dreier et al 2004, Jackson 1985) or neighborhood segregation (e.g. Massey and Denton 1993)[32]; and on racial segregation (e.g. Charles 2003) or

[32] M.J. Fischer (2008), Reardon, Yun and Eitle (2000), C.S. Fischer et al (2004), and Rhode and Strumpf (2003) are notable exceptions. However, none of these authors analyze the political causes or consequences of segregation.

class segregation (e.g. Bischoff and Reardon 2013) – but these types of sorting are intricately linked. Class segregation and racial segregation are correlated, but they are not identical. Determining both the causes and consequences of segregation requires taking these linkages into account. The data that I have collected measure segregation both within and across cities, they account for both race and class divisions, and cover city expenditures on a wide range of services during the entire 20th century. This required the encoding of archival data, the generation of new spatial data using GIS, and the compilation of thousands of digitized observations from the United States Census. The comprehensiveness of the data allows for a more complete picture of the patterns of segregation over time and allows for an analysis of the factors that give rise to this variation.

I find generally, that I am better able to explain the causes and consequences of racial segregation. In part this is because the data for measuring racial segregation are available for a longer time series and at a finer grain of detail than the data for measuring class segregation. But, the historical record is also clear that exclusion of other races has been a more powerful driver of these processes than exclusion of the poor. This is evidenced by the fact that many neighborhoods contain a mixture of homeowners and renters, as well as varied income levels, even when they are dominated by a single racial group. As a result, racial segregation has always been higher than class segregation. However, today, local policies that generate class based exclusion are generally upheld by courts, while race based exclusion is not. Additionally, income inequality has increased in recent decades. As a result, class segregation has risen and will likely continue to rise, even while racial segregation declines.

Throughout my empirical analyses I face profound causal challenges. In some cases my analysis is plagued by reverse causality: do white residents move to the suburbs because the

central city elected a black mayor, or did the moving of white residents make it possible for a black mayor to get elected? In other cases, my analysis suffers from an inability to disentangle selection from treatment: does living in a homogenous white neighborhood make people more conservative or do people with conservative views move to homogenous neighborhoods? In still other cases, my argument would be aided by evidence of strategy on the part of local elites, but none exists: zoning generates greater segregation, but could this have been an unintended consequence?

In each chapter I describe the hurdles presented by the (lack of) data and my strategies for overcoming them. Generally, I seek to build a case for my argument using both detailed qualitative evidence and quantitative evidence from hundreds or even thousands of places. I often draw on the timing of events for evidence of causality and, where I am able I utilize instrumental variables to underscore my findings.

Contributions to Existing Literature

This book contributes to a number of dense literatures including work focused on segregation, public goods, attitudes toward outgroups, and political inequality. Although a great deal has been written on each of these topics, very little research engages more than one of these areas. For instance, Tiebout's (1956) seminal article arguing that consumer-voters pick communities which best satisfy their preferences for public goods ignores the role of race, segregation, and inequality in these choices and is silent about the ways in which public goods packages are developed. Other scholars (Alesina et al 1998) show that diversity drives down collective investment in public goods, but do not consider the ways that geo-spatial arrangements might affect this relationship. Still others have shown that whites' desire for homogeneity has played a role in generating racial segregation between cities and school districts (Reber 2005,

Baum-Snow and Lutz 2011, Boustan 2010). However, these works largely ignore the political mechanisms by which such preferences are realized (e.g. the development of zoning policies).[33]

Outside of (excellent) case studies focused on one to two metropolitan areas at a time (Danielson 1976, Hirsch 1983, Sugrue 1996, Kruse 2005, Lassiter 2006, Kraus 2000), to date most of the research analyzing the relationship between segregation and public policy has focused on national level programs like the Federal Housing Administration underwriting guidelines (Jackson 1985) or the Home Owners Loan Corporation neighborhood investment ratings (Hillier 2005).[34] With such far reaching effects, the focus on these programs has been well placed, but has tended to obscure considerable subnational variation; and while the case studies offer invaluable historical detail, they are unable to provide evidence of broader patterns of the effect of local policies on segregation. In short, while scholars have documented changing patterns in racial and class segregation, they have not demonstrated the ongoing role of city politics and local service policy in creating segregation and growing inequality. I show how patterns of local service delivery, zoning laws, and other local policies not only mirrored patterns of segregation but also very much drove them – not only in the pre-civil rights era, but also in recent decades.

Although many scholars have suggested that segregation across neighborhoods or between cities and suburbs fosters inequalities in access to public goods (Massey and Denton

[33] Baum-Snow and Lutz analyze the effect of school district desegregation orders on suburbanization. So, while they focus on the effect of a public policy, they are not concerned with policies that intentionally aided segregationist preferences.

[34] Important exceptions include Rothwell (2011) who analyzes the effect of low density zoning on metropolitan area racial segregation and Dreier et al (2004) who suggest (although they do not provide direct evidence) that zoning and redevelopment affect economic segregation across cities. Cutler, Glaeser, and Vigdor (1999) find support for a theory of "collective action racism" prior to 1970. They show that housing prices for equivalent quality housing were higher for blacks than for whites implying that whites acted collectively to limit black housing choices. However, the authors do not provide any analysis of the types of collective action in which whites engaged beyond speculating that restrictive covenants and racial zoning may have played a role. Importantly, Cutler et al do not distinguish between collective actions that occur in the public versus private realm.

1993, Burns 1994, Dreier et al 2004), very little research offers systematic evidence of this intuition.[35] Other scholars have carefully documented the pernicious effects of segregation on individual level outcomes (Ananat 2011, Cutler and Glaeser 1997), but have not offered a direct link between these outcomes and allocation of public goods. I offer quantitative and qualitative data showing that segregation across both neighborhoods and cities allows governments to disinvest in poor and minority communities and this produces unequal access to public goods. These results help to explain why social mobility is tied to place, as scholars like Sharkey (2013) and Sampson (2012) find, and demonstrate the consequences of public policy and segregation for larger patterns of inequality.

Much of the work investigating the determinants of segregation (both within cities across neighborhoods, and within regions across cities and suburbs) argues or assumes that the important driver of racial segregation is prejudice – that is, attitudinal predispositions toward racial and ethnic minority groups. This is an insufficient account. It is insufficient first because racial segregation has not declined as precipitously as one would predict given dramatic changes in overt expressions of racism. I argue that the institutionalization of prejudice through local public policy makes segregation more rigid. Second, pure prejudice does little to explain the rise of class segregation. I argue that if we understand segregation as a mechanism to protect public goods and property values, increasing class segregation is predictable. Finally, a pure prejudice account leaves unexplored the basis for these predispositions. I argue that beliefs about the acceptability of different demographic groups as neighbors (e.g. what we might take to be pure

[35] An important exception is Troesken (2001) who provides direct evidence of the relationship between segregation and public goods inequalities. He shows that cities with racial segregation were more likely to generate unequal access to municipal water and sewer connections in the late 19th and early 20th centuries.

prejudice) were influenced by the distributions of public goods and battles over those distributions decades ago.

Contrary to some scholars' conclusion that the core problems of segregation have been alleviated, I show that segregation persists, that segregation has grown across cities, and that government policies continue to play a central role in perpetuating segregation.[36] White, wealthy Americans are still trying to segregate themselves. And local governments still tend to invest more toward whites and the wealthy. I build this argument through seven substantive chapters and a conclusion that considers omissions from the book and forecasts the path forward.

Chapter Summaries

In order to orient the study, in Chapter 1, I provide descriptive information regarding changes in segregation and public goods spending over the course of the 20th century. I offer an overview of patterns that will be linked through the chapters that follow. I begin by providing a broad overview of spending between 1900 and 1940. It reveals that cities increased expenditures on street paving and lighting, refuse collection, sewers, libraries, health, education, public safety, and recreation, and increased revenue from taxes. During this early period, cities became modern service providers.

Next, I explore early patterns of race and class segregation. I show that racial segregation increased dramatically between 1890 and 1940 while class segregation increased marginally. It was in the cities with the largest budgets that segregation increased the most. Then, I turn to analyzing fiscal and segregation patterns between 1970 and 2011. I argue that during this period, white property owners turned to suburbanization as their primary mechanism for protecting

[36] Several recent headlines make this claim "Glimpses of a Ghetto-Free Future," "Segregation Continues to Decline in Most U.S. Cities, Census Figures Show," "The End of the Segregated Century: Racial Separation in America's Neighborhoods, 1890-2010."

property values. After 1970 the dominant trend in both race and class segregation was increasing differentiation between cities. During this period, suburban governments grew more intensely than central cities so that by 2011, central cities accounted for a smaller share of total metro area spending than they had in 1970.

In Chapter 2, I provide the first piece of evidence directly linking the patterns described in Chapter 1 by showing that public goods considerations drove efforts to segregate in the early decades of the 20th century. Acting in response to white homeowners and land-oriented businesses, local government policy explicitly sought to exclude people of color from white neighborhoods and poor individuals from wealthy neighborhoods. In empirical analyses I analyze the factors that encouraged the adoption of zoning laws and the role that zoning laws played in the development of race and class segregation. I find that exclusion was most adamantly pursued in cities that had become significant providers of public goods, where property taxes were high (and so, raising property values was attractive), and where political support for Progressive reform was strongest. I supplement this analysis with qualitative evidence that reveals the many factors local governments utilized to promote segregation, including strategies like the siting of segregated public goods such as parks and schools. Finally, this chapter reveals that zoning laws had their intended effect: early zoning adopters segregated more rapidly over the next several decades compared to cities without similar ordinances and zoned cities witnessed greater inequalities in housing values.

Chapter 3 documents the unequal provision of public goods that early segregation allowed. Using historical case study evidence, I show that poor and minority neighborhoods consistently received worse public amenities like road paving, and health clinics. I draw on detailed ward level data from Baltimore, Boston, Chicago, and Philadelphia to show that sewer

extensions were less likely to be built in neighborhoods with higher proportions of African American and renting residents. As a result, inequality in water and sewer access was greater in more segregated places. I show that these inequalities persisted. Using data on all tracts in all cities in the United States, I provide evidence that whites and minorities, and renters and homeowners had differential rates of access to public sewers in more segregated places in 1970, 1980, and 1990. I argue that these inequalities in service provision affected the ways in which white and wealthy residents would come to view poor and minority neighbors. Daria Roithmayr (2014) points out, "we see the strongest evidence of continuing discrimination in housing markets" (p18). This is because the roots of this bias are whites' conscious and subconscious beliefs about the effect of nonwhite and renter neighbors on property values and the quality of public goods – beliefs that were fostered by government choices at the turn of the 20th century.

Chapter 4 provides evidence of municipal policy effects on segregation in the middle of the 20th Century. By 1940, segregation was entrenched, as were the unequal allocations of public goods. But patterns would change in the post war period. In some places segregation along racial lines increased, while in others it had already begun to decline (as it would everywhere after 1970). Class segregation began a slow ascent and then leveled off. As was the case in the first time period analyzed, local public policy played a role in these patterns. I provide evidence that cities that more vigorously implemented urban renewal programs grew more segregated along both race and class lines. I also show that during the 1960s and 70s, in many cities white homeowners lost the political power needed to police the borders of their neighborhoods and control the distribution of public goods. I argue that such changes made suburban living a more attractive option than living in homogenous neighborhoods within cities.

Between 1970 and 2000, the major change in segregation patterns occurred between cities. That is, neighborhoods became more racially integrated within cities, but whole cities became more racially homogenous. Class segregation across cities also increased during this period. Chapter 5 offers an analysis of the role of local political control in generating these changes. Using demographic and finance data from all metropolitan areas in the United States between 1980 and 2000, I show that larger budgets, higher spending on policing, and minority mayoral victories are associated with more segregation across city lines. Where whites maintained control they were less likely to move to the suburbs. Throughout the postwar period cities and suburbs alike moved away from explicitly racial strategies toward class based tactics, such as large lot zoning and limiting multi-family developments, to ensure segregation. I show that more restrictive zoning by suburban cities increased both race and class segregation. As a result, suburban communities made decisions that profoundly affected non-suburban residents while preventing them from participating in the decision making process. In this context, representative government, policy responsiveness, and political equality became hollow concepts.

In Chapters 6 and 7, I focus on the consequences of segregation for modern politics. In Chapter 6, I analyze the consequences of segregation within cities. Quite ironically given early claims that segregation was the best solution to racial discord, I show that segregation is associated with deep race and class divisions that dominate city politics today. Polarization makes cooperation difficult and, I show that segregated cities have smaller city budgets and spend less on individual categories of expenditure such as roads, policing, parks, and sewers. Underinvestment means that city services do not operate well. Focusing on one measurable area

of public goods provision, I demonstrate that sewer overflows are more frequent in segregated cities.

In Chapter 7, I focus on the effects of segregation for national level politics. I draw on case study and large-n evidence to show that the integration of public spaces and residential areas encouraged whites and the wealthy to move to the suburbs during the postwar period, which allowed for more control over political decisions and the distribution of public goods. Then, I draw on restricted-access General Social Survey data geo-coded to 1970 Census tracts to show that residents who live in neighborhoods that were whiter than the metropolitan area as a whole in 1970 are much more conservative than those who live in more integrated places. I argue that this conservatism is rooted in the battles over integration that occurred in earlier decades.

In the conclusion of the book, I pull the many pieces of evidence presented previously into a single framework and discuss what the future holds. I reiterate my main claim: local governments pursue segregation at the behest of politically powerful interests. This allows politicians to target public goods towards some residents and away from others, resulting in differential access to public goods. Segregation generates unequal political outcomes which in turn, reinforces segregation. By linking neighborhood level segregation to suburbanization, I suggest that preferences for separation have changed in form, but not intent over time. Going forward we can expect additional change. Rather than seeking residential segregation, some individuals will choose to leave the public realm altogether – relying more heavily on private provision of services like education, policing, and park space. We have some evidence that privatization has increased even as many cities have become more integrated. The drive to protect property values, ensure good schools for children, and safe streets for families has

remained a powerful force. In the final section of this concluding chapter I consider some potential policy solutions to these seemingly intractable problems. I suggest that the most promising path forward is to utilize lessons from school finance reform (e.g. Lafortune, Rothstein, and Schanzenbach 2015) to guide state governments' approach to producing more equal access to a range of local public goods.

Chapter 1: Segregation and Public Goods over the 20th century

At the turn of the 20th Century, cities in the United States experienced intense demographic change. The first waves of African American migrants left the South for Northern communities, and immigrants from Europe streamed across the borders until the onset of World War I and the implementation of restrictive immigration laws. By the middle of the Century, the spatial distribution of residents was markedly different than it had been 50 years prior; and patterns would change again over the ensuing 50 years. Until the onset of the Great Depression, expenditures by local governments also grew rapidly. It was during this period that the foundation for modern urban politics was laid across the nation. This growth in municipal spending continued unabated for the next 100 years, but it was uneven, favoring suburbs at the expense of cities. This chapter charts and links changes in both demographics and service provision in metropolitan America.

I begin with a presentation of data on the growth of expenditures during the first four decades of the 20th century. I analyze demographic correlates of this growth, showing that homeownership, wealth, diversity, and density were all associated with expanding municipal governments. This, I argue, explains why white homeowners and land-oriented businesses pursued residential segregation: to protect property values and capture public goods. Next, I present the changing patterns of race and class segregation for these early decades. I show that cities with greater spending became more segregated. I then turn to an analysis of spending and segregation between 1970 and 2010, concentrating on the effects of suburbanization. I provide evidence showing that the level at which segregation occurred shifted during this time. While neighborhoods within cities became less segregated, cities started to look increasingly different

from one another. As the next several chapters will reveal, the changing level of segregation has had significant implications for the allocation of resources.

The Rise of Urban America

In the year 1800, only 5% of the population of the United States lived in cities and approximately 90% of the workforce was tied to agriculture. For the next half century, this figure inched modestly upwards, so that by 1850, 15% of population lived in urban areas.[37] After the end of the Civil War, the pace of urbanization (and industrialization) increased dramatically. By 1900, the nation was 40% urban and in 1920, the Census reported a majority urban nation for the first time. This trend continued; today the nation is approximately 80% urban.

As industrialization advanced, massive demographic shifts accompanied the economic changes. Cities began to fill with migrants and immigrants seeking work in the new factories and service sectors. During this period, most workers commuted to their jobs by foot, limiting the distance residential neighborhoods could be located from places of employment. The result was massive overcrowding – in some cities as early as the first decades of the 1800s. Housing and sanitary capacities became overextended; epidemics and conflagrations were rampant. O'Connor (1984) offers a vivid description of early 19th century Boston:

> Within the heart of the old city…things had deteriorated badly over the years…Its meandering streets…were hedged in by four and five-story houses that blocked out the sunlight. Pedestrians were in constant danger of being knocked down by stagecoaches, or bowled over by droves of pigs being hustled to market….[An] abominable stench rose above it all. Not merely the oily fish smells from the docks, the briny tang of salt water, or the sickish odor of the mudflats at low tide. This was the repulsive reek of

[37] The Census determines whether a particular geographical area is urban based on population size and density. Rural territory is any area that is not urban. Starting in 1900, the Census has defined urban areas as all places with at least 2,500 residents. From 1910-1950, urban areas only included incorporated places (e.g. cities) that met the size threshold. In more recent decades, the determination has been a combination of size and density; urban areas contain at least 2,500 people have a density threshold of at least 1,000 people per square mile.

> uncontrolled street refuse and untended garbage. To make matters worse, the city's sewerage system emptied out into the Town Dock… (p80).

Despite the clear benefits of moving away from the center of town, the nature of transportation and the needs of industry meant that even while they grew larger and more diverse, cities in the 1800s experienced low levels of segregation along race and class lines. At this time, the population of urban blacks was heavily concentrated in Southern cities. My dataset includes demographics for 296 cities from the 1900 Census of Population and Housing. These cities housed about 1.2 million black residents; approximately 64% of whom lived in the South. In an early analysis of *The Negro Ghetto* (1948) Robert Weaver explained, "in the cities of the Old South, like Charleston and New Orleans…most of the dwellings occupied by Negroes were either servants' quarters in the rear of the better houses or shacks on streets where low-income groups of whites also lived," (p8). In the north, Weaver says blacks "usually lived in clusters in racially mixed neighborhoods," (p9-10). However, detailed research on New York and Chicago by Logan et al (2015) reveals that although northern blacks did not live in "*predominately* black neighborhoods", they did live in "*disproportionately* black…neighborhoods," (p1062). What this means, is that while neighborhoods were mixed in the aggregate (thereby generating low measures of segregation), the housing available to blacks and other racial minorities in urban areas, was nonetheless heavily restricted from the start. Yet, because political representation is frequently defined at the neighborhood level, with low levels of neighborhood segregation, blacks and other minorities were likely to benefit from public goods provided to white homeowners.

Until about 1930, "state and local governments were *the* governments of most Americans" (McDonald and Ward 1984, p14). This was especially true with respect to fiscal

affairs. To the extent that *any* government would have addressed the negative externalities associated with rapid urbanization, it would have been viewed as the responsibility of the city (and their parent states). Yet, throughout the first half of the 19th century, city governments were fairly limited in scope. The economies of early cities were largely commercial, and a dedication to privatism and the market generally dictated political affairs (Monkkonen 1988, Warner 1968, McDonald 1986). A large and meddlesome government was something to be suspicious of and few cities provided extensive public services. Government was run by (and services were often partially funded by) the wealthy – typically merchants. As Bridges (1984) explains of New York City in 1830s, "it is impossible to determine where government began and noblesse oblige (and the church) ended" (p72).

In most instances, services were handled by volunteers (e.g. fire brigades) or part-time, municipally funded workers (e.g. night watchmen); and while city budgets provided contributions toward these services, city responsibilities were largely focused on regulating access to urban activities (like city markets). But by the end of the 19th century, city governments began to adopt a new orientation toward public goods provision and city leadership began to shift away from wealthy merchants and toward career politicians. As a result, services came to be increasingly funded by city budgets, not charitable contributions. Monkkonen (1988) argues that city goals had been broadened by the 1890s to include:

> Protecting private property (firefighting); suppressing crime; controlling behavior in public areas; building and maintaining streets and sewerage systems; aiding the poor, schooling children and sometimes adults; funding public libraries; providing recreation and entertainment; supporting a minimal level of health; temporarily assisting all persons incapable of caring for themselves…; enforcing public morality; expending direct financial aid to private capital…; and constructing not-for-profit public buildings in which to house these activities (p218).

Historians do not agree on what caused the transition from the regulatory approach of antebellum governments to what Monkkonen calls the "service city" by the late 1800s. Yet, with one exception (Brown and Halaby 1984), scholars have not analyzed this development quantitatively in more than a handful of cities. Simply put, we lack systematic, quantitative knowledge of the factors that affected the development and expansion of city government at the turn of the 20th century when significant variation was present. In 1902, for example, the median per capita expenditure of local governments in cities over the size of 25,000 (n=160) was about $11, but the standard deviation was more than a third of that amount ($4). Some cities spent very little providing services for residents, others, a great deal. If city governments were once limited and weak, why did some choose to begin providing services for residents while others lagged behind?

The dominant paradigm is to understand the growth of city government as the necessary response to the negative externalities of increased population growth and density such as pollution, congestion, conflagration, crime, and disease (see for example Griffith 1927, Still 1948, Glaab and Brown 1967, Chudacoff 1975, Anderson 1977, Troesken 2004). Scholars have generally recognized that the capacity to fund such developments through taxation and debt varied widely across cities (Dilworth 2005, Cutler and Miller 2006, Monkkonen 1988).[38]

Some scholars argue that managing racial and ethnic diversity in growing, compact cities was an essential driver of the development of municipal government. In an analysis of city relief spending in 1929, Cybelle Fox (2012) argues that native-born Americans and social welfare workers sought to Americanize foreign-born populations by drawing them into the reach of government. Tebeau (2003) shows that the development and expansion of fire services was an

[38] Research indicates that prior to the advent of the municipal bond market, cities were largely unable to invest in large infrastructural development.

attempt to confiscate power from ethnic fire brigades, ensuring that firemen would be loyal to the city and not to their group. Similarly, Monkkonen (1988) argues that spending was a mechanism to manage conflict. As cities grew, he says, the bureaucracy of municipal government was invoked to manage conflict and Americanize newcomers as a substitute for small town interactions. In support of this thesis, Brown and Halaby (1984) find a substantial, positive relationship between expenditures and percent foreign born. But contrary to these arguments, Goldin and Katz (2008) show that community *homogeneity* was key in the expansion of free public schooling. A large literature linking diversity and limited public goods provision underscores this finding (Alesina et al. 1999, Poterba 1997, Vigdor 2004, Hopkins 2009, Habyarimana et al. 2007, 2009, Miguel and Gugerty 2005, Miguel 2004, Algan et al. 2011, Fearon and Laitin 1996). This leaves no clear prediction regarding the direction of the relationship between diversity and spending.

Several accounts emphasize demands made by emerging middle-class residents (Yearly 1970), as views regarding what it was the duty of government to provide evolved (Myrdal 1944). McDonald (1986) suggests that property owners in particular wanted good public services which led to high spending through debt. Others highlight the demands of newly minted professionals engaged in the private provision of services, who would benefit from public funding. Teachers pushed for public education; fire fighters pushed for fire forces (Katznelson and Weir 1985, Tebeau 2003). Along these same lines, Monkennen (1988) highlights the growing role of planners, real estate developers, and professional bureaucrats who helped to build the Progressive reform movement (see also Hays 1964, Bridges 1997, Tretter 2012 on Progressivism and growth).

City Spending Data

To provide a description of historical expenditure patterns, I use a new dataset built from a number of government sources that includes data from the turn of the century to the Second World War. Starting from 1902, the Bureau of the Census has been responsible for collecting data on the finances of local governments. With a few exceptions, the data have been collected annually for cities that meet a particular population threshold (which has varied over time). The Federal Reserve Archive (http://fraser.stlouisfed.org/) has digitized copies of the paper Census reports up until the year 1941, and I encoded a series of relevant variables from these digital reports at five year intervals.[39] Thus, I have fiscal data from 1902, 1907, 1912, 1917, 1923,[40] 1927, 1932, and 1937, as well as other governmental data from a number of early special Census reports.[41] I encoded socioeconomic data from the Census of Population and Housing in 1900, 1910, 1920, 1930, and 1940. In order to be able to analyze the diversity of the population, I gathered data on the country of origin for all of the foreign born residents in each city. Details on the coding of foreign born groups are included in the appendix. Linear interpolation was used to create intercensal estimates for all of the socioeconomic variables. In my largest sample, I have a total of 1,397 city-year observations, which includes data from 262 cities.

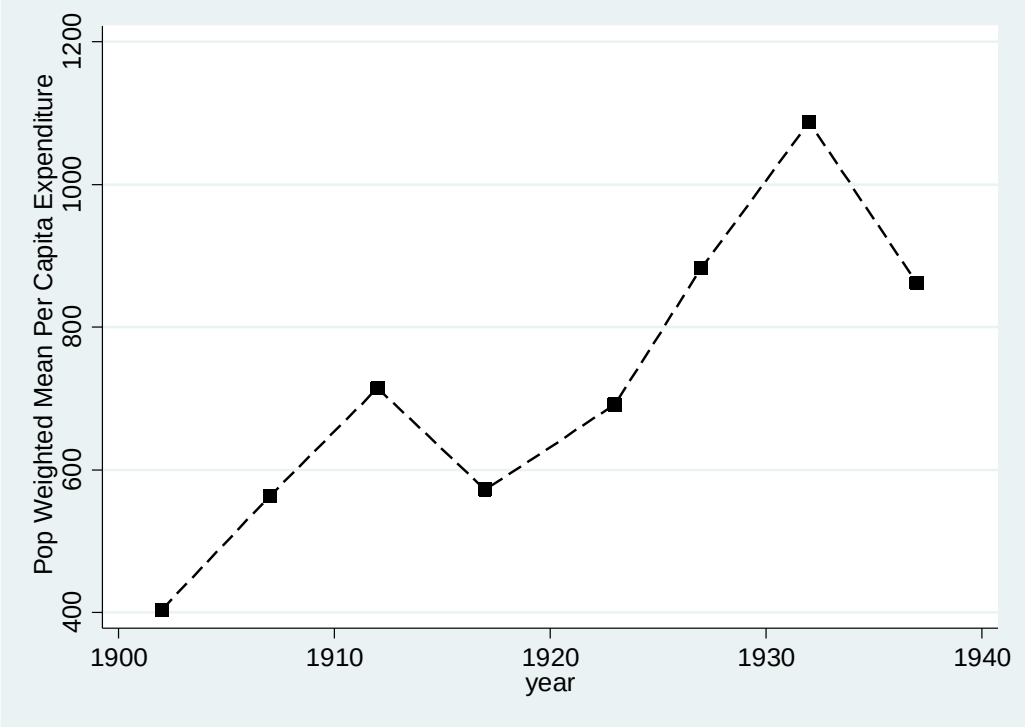
[39] The five year interval was selected to match the interval that the Census of Government used starting in 1952. From 1902-1903, the report was entitled "Statistics of Cities Having a Population of over 25,000." From 1904-1908, it was entitled "Statistics of Cities Having a Population of over 30,000." From 1909-1931, it was entitled "Financial Statistics of Cities Having a Population of over 30,000." From 1932-1941, it was entitled "Financial Statistics of Cities Having a Population of over 100,000." Collection of data on local governments was spotty between 1942 and 1952. The Census resumed regular collection of data at five year intervals starting in 1952.

[40] The report produced in 1922 was limited to very basic data and lacked many of the variables of interest. The 1923 report was used instead.

[41] These include the General Statistics of Cities: 1909: Including Statistics of Sewers and Sewage Disposal, Refuse Collection and Disposal, Street Cleaning, Dust Prevention, Highways, and the General Highway Service of Cities Having a Population of Over 30,000; Municipal Electric Fire-Alarm and Police-Patrol Signaling Systems: 1912; General Statistics of Cities: 1915: Including Statistics of Governmental Organizations, Police Departments, Liquor Traffic, and Municipally Owned Water Supply Systems, in Cities Having a Population of Over 30,000; General Statistics of Cities: 1916: Including Statistics of Parks, Playgrounds, Museums and Art Galleries, Zoological Collections, Music and Entertainments, Swimming Pools and Bathing Beaches, and Other Features of the Recreation Service.

I begin with an analysis of total *Per Capita City Expenditure* as the dependent variable.[42] All data are shown in real (2012) dollars to make comparison to the modern period more straightforward. As Figure 1.1 shows, development of municipal budgets was rapid over this time period. The graph displays the population-weighted mean of per capita total expenditure, plotted against time for all cities that had more than 30,000 residents in 1902. Tables 1.1 and 1.2 show inflation adjusted (but unweighted) mean per capita spending and revenue on various categories over the same time period.

Figure 1.1: Municipal Expenditures Per Capita
In 2012 dollars



[42] This measure includes all general expenses, expenditures on interest, and outlays for the municipal corporation.

Table 1.1: Municipal Budgets in the Early 20th Century
Per capita expenditures in 2012 dollars

year	Expenditure	General Expenditure	Outlays	Revenue	Taxes	Subventions
1902	$313.0		$ 114.2	$425.5	$269.3	$20.6
1907	$409.7	$279.2	$174.0	$418.6	$285.6	$24.4
1912	$562.0	$323.0	$207.9	$541.7	$364.9	$27.3
1917	$456.7	$274.7	$168.0	$408.8	$314.6	$22.1
1923	$587.0	$393.9	$205.2	$491.5	$431.2	$29.2
1927	$700.7	$460.9	$247.3	$586.7	$521.9	$32.2
1932	$868.7	$700.3	$173.3	$807.4	$710.8	$65.0
1937	$670.9	$682.2	$115.5	$704.0	$643.9	$126.9

Table 1.2: Municipal Spending in the Early 20th Century
Per capita expenditures in 2012 dollars

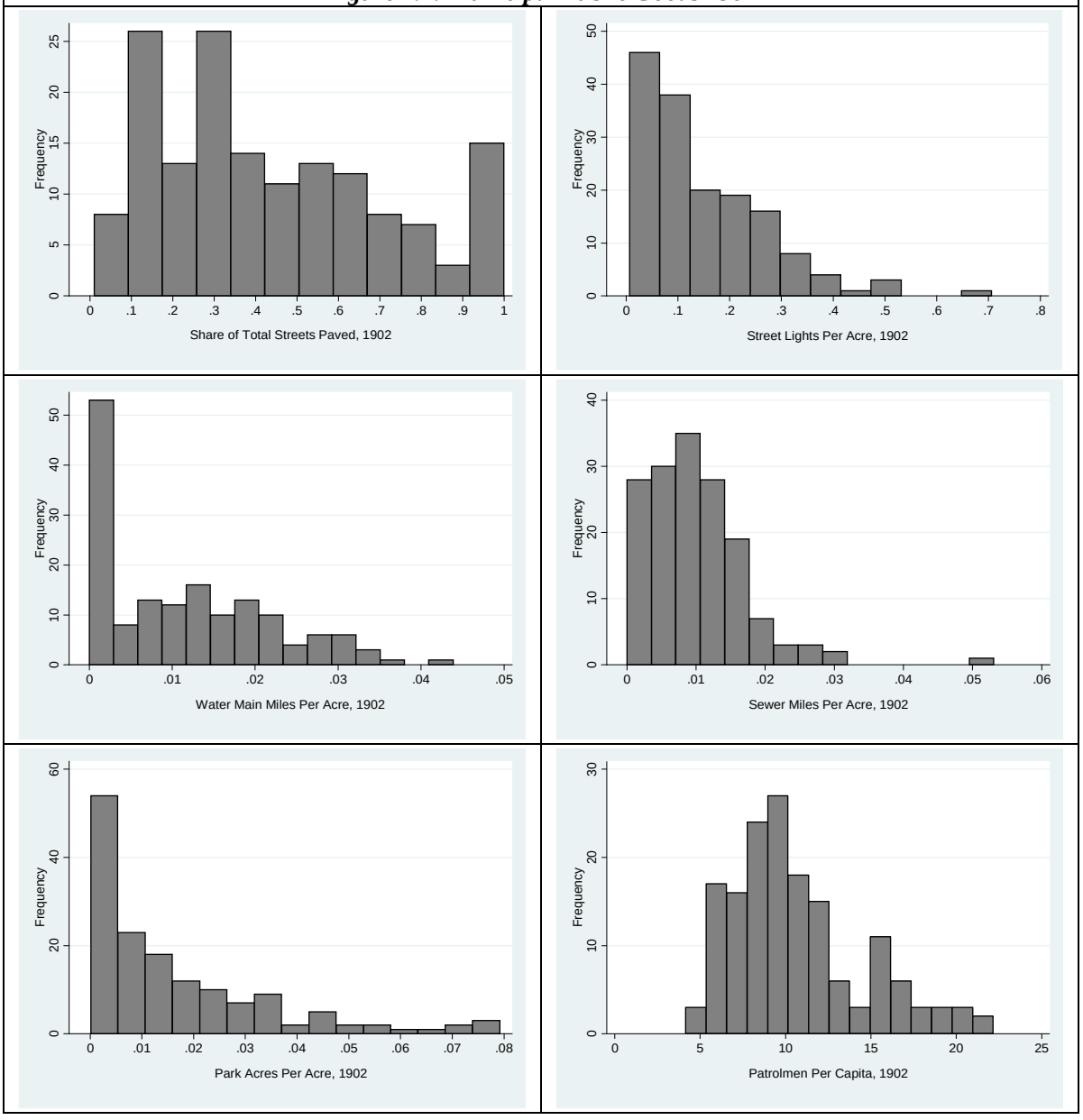
Year	Inspections	Refuse Collection	Sewers	Libraries	Police	Fire	Health	Highways	Recreation	Schools
1902	$1.3	$4.6	$3.7	$3.0	$28.9	$31.1	$4.8	$43.2	$6.5	$84.4
1907	$1.4	$6.7	$4.6	$4.4	$31.4	$35.4	$4.6	$38.7	$7.3	$96.0
1912	$2.2	$19.6	$5.0	$5.1	$33.3	$37.9	$6.2	$42.2	$10.1	$107.7
1917	$1.9	$16.1	$3.8	$4.0	$27.0	$29.2	$6.3	$32.6	$8.9	$97.5
1923	$2.4	$11.9	$5.1	$5.6	$36.1	$39.8	$9.0	$39.0	$11.9	$161.8
1927	$3.0	$14.1	$5.9	$6.7	$43.6	$45.2	$11.2	$43.4	$13.1	$202.3
1932	$3.9	$18.7	$7.7	$10.7	$63.2	$57.2	$17.7	$51.6	$22.3	$257.5
1937	$3.4	$16.1	$7.9	$10.7	$60.3	$53.5	$11.5	$43.4	$21.2	$233.0

The figure and tables reveal that during this period, city expenditures grew across the board. In every category, from sanitation to safety, from health to highways, American cities became modern service providers. Spending slid back during the time of the First World War and the Great Depression, but otherwise followed a steep upward trajectory. Over the next 70 years, growth continued. In 2012, per capita spending was literally 10 times what it had been in 1902. Yet, even at the start of the period, growth was uneven.

Figure 1.2 shows histograms of a number of different public goods that were provided by cities in 1902, including the share of total street miles that were paved, the number of street lights per acre, water main miles per acre, sewer miles per acre, park acres per acre, and

patrolmen per capita. All of the distributions are widely spread. Clearly, significant variation existed.

Figure 1.2: Municipal Public Goods 1902



To analyze the correlates of expenditure, I regress the natural log of inflation adjusted *Expenditures Per Capita* on several variables intended to capture explanations offered in the historical literature. Many scholars have argued that cities responded to pressing needs as they arose. For instance, Glaab and Brown (1967) argue that industrialization and population growth generated demands that were fulfilled by city government. While my dependent variable is measured as per capita spending, it is still possible that large and/or dense cities may have required higher levels of spending (if, for example, fires or diseases were more likely to spread in such places). Monkkonen (1988) argues that the need for social control through bureaucratization was greatest in large cities. Alternatively, large cities may have benefitted from returns to scale, and therefore may have been able to provide services for a lower cost. To test for these possibilities, I include a measure of the *Total Population* (logged) and *Density* (total population divided by total acres).

The analyses also include two different measures of diversity. The first is the share of all residents that were classified as *Nonwhite* by the Census of Population and Housing. During this period, racial categorization was in flux (Roediger 2005) and the determination of race was made by Census takers (Nobles 2000). However, generally speaking, the *Nonwhite* category included Blacks, Asians and Asian Americans, Native Americans, and sometimes Mexican/Latin Americans. Persons of mixed race were typically identified as nonwhite.

The second measure of diversity is a Herfindahl Index:

$$Diversity = 1 - \sum_{f=1}^{F} \pi_f^2$$

where, π_f is the population share of the foreign-born group *f* and F is the total number of foreign-born groups. There were 52 different foreign-born groups recorded by the Census during this

period (listed in the appendix), and the resulting diversity index ranges from a low of 0.23 to 0.94, with a mean of 0.84.[43] This illustrates that the foreign-born population in the United States was extremely diverse.

As explained above, property owners were among the most supportive of investing in new services (McDonald 1986). However, scholars also report a general tendency among the populace to rail against high taxes and profligate spending of city governments in the late 19th and early 20th centuries (Bridges 1984). According to Monkkonen (1988), this belief was particularly pronounced among property owners. To investigate the role of support for spending among owners, I include the proportion of housing units occupied by *Home Owners*. To measure the wealth of the community I include the *Assessed Value* of all property in the city. McDonald (1986) provides compelling evidence that this measure accurately captures the level of economic development in the city – which should correlate positively with ability to fund city services.[44] Finally, to capture the argument that the development of city services was driven by the emerging professional class (including land developers and planners), I add the share of adults employed as *Professionals*.[45] Because I have missing data on a number of variables, I begin with a presentation of the results using only density and population as independent variables. I then add the remaining variables iteratively. Summary statistics for all variables are in appendix Table A1.1.

[43] Making these categories comparable across censuses required some recoding. For instance, in 1930 and 1940, Irish immigrants were separated by Northern and Southern Ireland. I combined these categories to make the data comparable to the 1900, 1910, and 1920 censuses, which included only one category for Ireland.
[44] However, McDonald (1986) finds that when assessed value rose in San Francisco, politicians tended to lower tax rates, perhaps resulting in little difference in expenditure.
[45] The other occupational categories coded by the Census during this period were trade, manufacturing, domestic work, and agriculture. In 1900, the category professionals included actors, architects, artists, clergymen, dentists, electricians, engineers and surveyors, journalists, lawyers, literary and scientific persons, musicians, government officials, physicians, teachers, and other professionals.

These variables are admittedly insufficient to capture all of the important differences across cities during this period. So, rather than attempt to explain variation across cities, I pursue a more modest goal – to describe variation within cities over time. To do so requires that I use a city fixed effects model for the analysis. This strategy overwhelms much of the variation present in the data, but it allows for a more precise estimate of the effect of each of these contextual variables on spending. Table 1.3 presents the results.

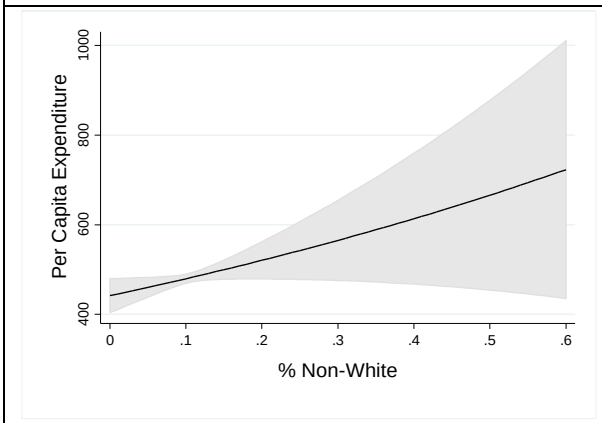
Table 1.3: Factors Affecting City Wide Expenditure

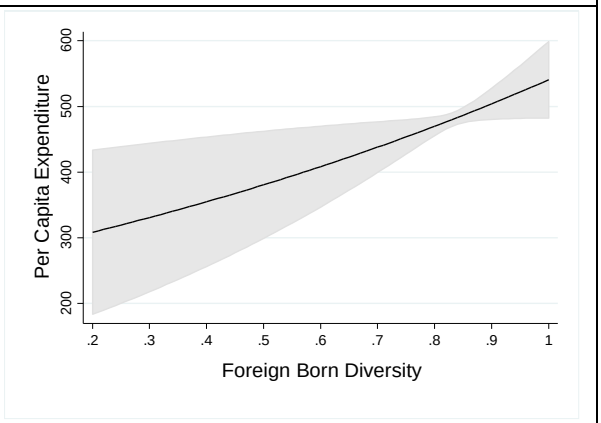
	Logged Per Capita Expenditure								
	β	Std. Err	P>|t|	β	Std. Err	P>|t|	β	Std. Err	P>|t|
Population (log)	0.520	0.037	0.000	0.329	0.047	0.000	0.263	0.051	0.000
Density	0.016	0.004	0.000	0.013	0.004	0.001	0.01	0.004	0.011
% Nonwhite				0.838	0.412	0.042	0.821	0.409	0.045
Foreign Born Diversity				0.893	0.322	0.006	0.702	0.326	0.031
Assessed Value ($100 mill)				0.005	0.003	0.104	0.005	0.003	0.138
% Home Owners				2.672	0.385	0.000	2.030	0.423	0.000
% Professionals							3.197	0.934	0.001
Constant	0.045	0.421	0.961	0.332	0.481	0.49	1.275	0.559	0.023
N	1,397			1051			1040		
Number of Cities	262			173			169		
R^2 within	0.175			0.301			0.315		
R^2 between	0.064			0.077			0.112		
ρ	0.681			0.606			0.567		

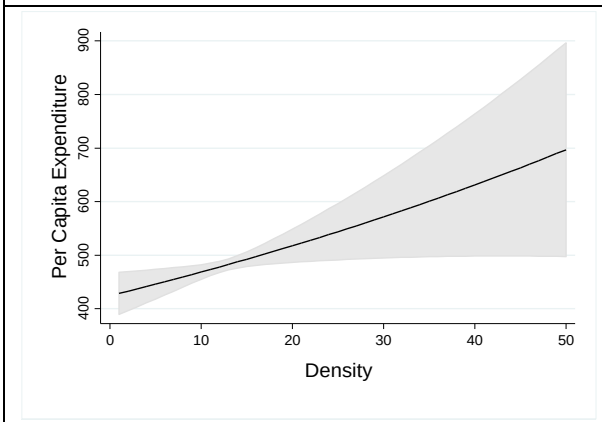
Note: Fixed effect for cities included, but not presented

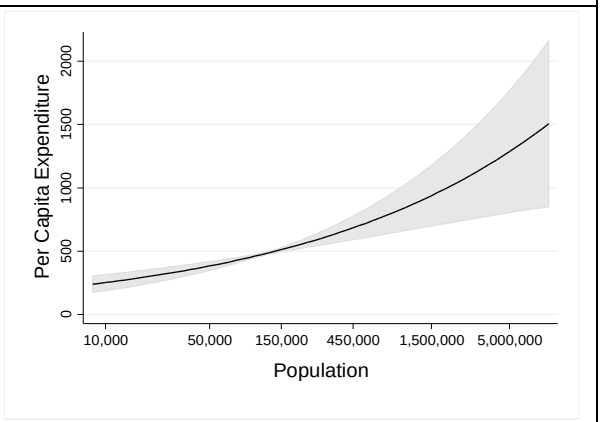
The regression reveals that the factors identified by historical research *do* correlate with expenditures. Cities that were more diverse (either having more nonwhite residents or a diverse foreign-born population from many different places) spent more money. Those places with large, dense populations witnessed higher spending per resident. In an alternate analysis, I add the number of fires per capita that the city experienced in 1902 and 1907. This variable is powerful. Increasing from the 25th to the 75th percentile (from 3 to 5 fires per 1000 people each year), increased spending by $50 per resident. Cities were clearly responding to the negative externalities associated with urbanization. Finally, cities with more capacity and demand (higher property values, more homeowners, and more professionals) also had larger budgets. These results are shown graphically in Figure 1.4. Figures show the marginal effect of each independent variable, holding all other variables at their mean value.

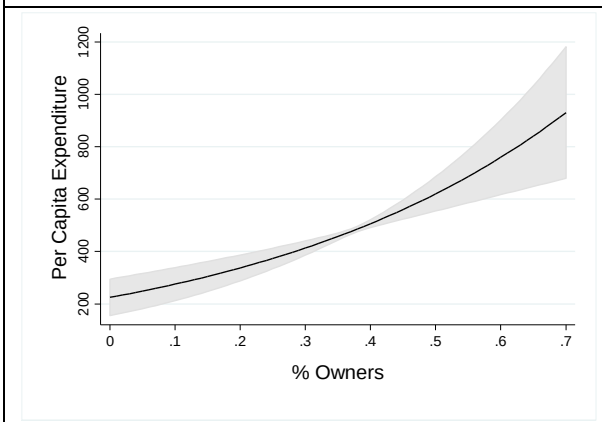
Figure 1.4: Factors Related to Expenditure in Cities, 1902-1937

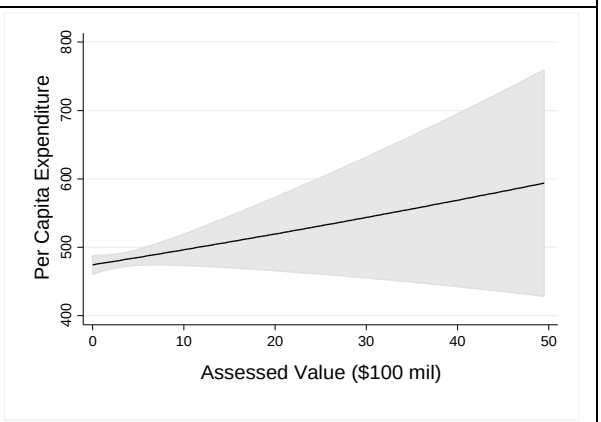


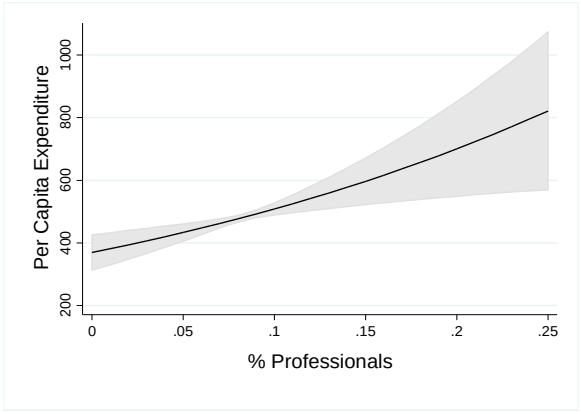












In this book, I argue that white, homeowners sought to institutionalize the residential segregation of poor and minority residents in order to protect their property values and control the distribution of public goods. They were supported in this pursuit by land-oriented businesses. The pattern of relationships presented in Table 1.1 and Figure 1.4 begin to explain this impetus – particularly the positive correlation between property ownership, assessed value, percent professionals, and municipal expenditures. Holding all other variables at their means, a city that was in the 25th percentile of home-owning, assessed value, and professionals (30% owners, $43 million in assessed value, 6% professionals) spent about $378 per resident. A city in the 75th percentile of all three measures (45% owners, $218 million in assessed value, 10% professionals) spent about $588 per person.

These relationships were circular. Local service provision was understood to increase the value of property. It was for this reason that the property tax was thought to be the most appropriate avenue for supporting local expenditures, as owners would be able to "recoup at least part of the levies in the form of higher real property worth" (Benson and O'Halloran 1987). Thus, property owners sought high levels of municipal services, which were expected to bring both direct benefits (from having access to clean water, paved streets, reliable fire-fighting, etc.)

and indirect benefits through increases in property values. In turn, cities expected owners to fund public goods. Yet, even in the early 20th century, owners were prone to believing that city governments were wasteful and they often opposed increases in taxes. Residents wanted high quality services, but were loath to pay for them.

Property owners' orientation toward both government and services was related to the emerging understanding of *who* should benefit from publicly-funded improvements (Myrdal 1944). The cities with the fastest growing service provision were also cities with high levels of racial and ethnic diversity. As Tretter (2012) explains, growth in municipal service provision operated "within a framework of white supremacy" (p10). Controlling who accessed the new benefits was of utmost importance. During this period, the vast majority of blacks, Asians, and Latinos lived in places where they lacked the right to vote; and everywhere, foreign-born residents had to be naturalized before participating (Keyssar 2000). Thus, the preferences of these groups hardly played a direct role in formation municipal policy. A white voter living in Birmingham in 1902 could be certain that no matter how much money the local government raised in taxes, black residents would have little say in how that money was spent. The same was true for a San Franciscan thinking about his Chinese neighbors and for an El Paso resident concerned with Mexicans in his city (Myrdal 1944, Chen 2000, Fox 2012). However, most public goods provided by cities were not targetable to individuals.[46]

When municipal governments provide streetlights and sewers, even those ineligible to vote benefit from these services. But, residential segregation could limit equality of access. Segregation made targeting services – at least to groups, if not individuals – easier. As will be

[46] Municipal jobs, particularly when distributed as patronage, are an exception to this statement. However, despite early accounts to the contrary, the presence of political machines actually depressed spending (Trounstine 2008, Fox 2010, Brown and Halaby 1984). Thus, it appears to be the case that growth in municipal governments has never really been driven by the logic of patronage.

shown in detail in the chapters to come, segregation allowed city governments to collect taxes from poor and minority residents, but underprovide services to them – thereby holding down the total tax bill. Oates (1981) explains that for many important local services such as education and public safety, the characteristics of residents are more important in determining the quality of the public good output than budgetary contributions. Thus, the generation of race and class segregation via policy enacted by local governments (such as zoning or urban renewal), was, in and of itself, a mechanism to improve municipal service provision. Segregation also ensured that the presence of poor and minority neighbors would not threaten property values. As the chapters ahead will show, it was in those places where city spending was high that segregation was institutionalized through local public policy; such institutionalization was pursued most adamantly by white owners and developers of property.

Explaining and Measuring Segregation

The high level of residential segregation in America has been tremendously well-documented (see Charles 2003, Ross 2008, and Boustan 2012 for extensive literature reviews). A smaller, though still well-developed, body of literature is focused on class segregation (see Bischoff and Reardon 2013 and Jargowsky 1996 for reviews). The debate over the fundamental causes of segregation is extensive and nuanced. Scholars have focused on two primary explanations: individual preferences for same race/income neighbors (particularly among whites and the wealthy) and market explanations (e.g. differences in the socioeconomic status of different racial groups and the ability to pay for quality housing/transportation among the poor).

Research on racial segregation largely concludes that the driving force behind residential separation is white preferences for same race neighbors (Cutler et al. 1999, Bayer, Ferreira, and

McMillian 2007, Charles 2006).[47] Boustan (2010) finds that in northern metropolitan areas, between 1940 and 1970, every black arrival from the South was associated with 2.7 white departures to the suburbs. Several scholars show that differences in socioeconomic characteristics such as education, income, wealth, and family structure cannot fully account for segregated living patterns for blacks, but *does* explain a fair amount of the segregation of Latinos and Asians (Bayer et al. 2004, Erbe 1975, Massey and Denton 1987 and 1993, Iceland and Wilkes 2006). Logan summarizes by explaining that racial segregation for blacks is due to the inability to "translate higher income…into residential mobility" (Logan 2011 p15).

Several scholars find that income inequality is an important driver of economic segregation (Bischoff and Reardon 2013, Watson 2009). Others concentrate on selection. Alesina et al. (2004) show that people are willing to give up economies of scale in order to avoid being in a jurisdiction with significant income heterogeneity and Bayer, Ferreira, and McMillian (2007) reveal that households self-segregate on the basis of education.

The links between race and class segregation also form a considerable literature. Some scholars like Denton and Massey (1991), Krysan et al. (2008), and Emerson, Chai, and Yancey (2001) find that whites avoid black neighbors *because* they are black, while others like Ellen (2000), Yinger (1997), Taub et al. (1984), and Harris (1999) argue that whites use black neighbors as a proxy for neighborhood quality. That is, whites do not avoid black neighbors per se, but rather choose what they perceive to be better neighborhood amenities or neighbor characteristics like wealth.

With only a handful of exceptions (e.g. Rothwell 2011, Pendall 2000), quantitative research on the causes of segregation ignores the political context in which it occurs. Local

[47] A small amount of scholarship shows that black preferences for same race neighbors contributes to segregation (Bayer, Ferreira, and McMillan 2007, Fossett 2006)

policies and political battles are crucial for understanding *how* white/wealthy preferences for homogeneity and socioeconomic inequalities are translated into residential patterns. To be sure, scholars have extensively documented the *private* mechanisms by which these factors affect segregation (e.g. via racial steering, mortgage discrimination, and willingness to pay for homogenous neighborhoods). But even private mechanisms may be shaped by local policies and political concerns. For example, I argue that white beliefs about available amenities in poor and minority neighborhoods are, in part, the product of under provision of public goods early in the 20th century. Cutler et al. (1999) find that these beliefs contribute to whites' willingness to pay higher housing prices in whiter neighborhoods. In the next section, I provide the first piece of evidence for this argument. Segregation is correlated with city expenditures – places that provide more services are also more segregated.

There are many different ways to measure segregation (e.g. the degree to which groups are disproportionately distributed across geographic space). Indices of segregation are typically correlated with each other, but capture different theoretical dimensions of separation and so, measure different things (Massey and Denton 1988). The two most commonly used measures are the index of dissimilarity and the index of isolation which can be intuitively interpreted respectively as the proportion of a racial group that would need to move neighborhoods in order to generate an even racial distribution given the racial makeup of the larger community, and the racial makeup of the neighborhood in which the typical member of the racial group lives. While these are obviously meaningful dimensions of segregation, neither measure includes the most relevant information from a political perspective. In politics, what matters is not just how individuals from different racial groups are distributed across neighborhoods, but also how large each racial group is relative to others and how big of an impact each neighborhood might have

on the vote. That is, we need a measure that weights diversity by group size and weights evenness by population size. The *H* index developed by Theil (1972) meets these criteria.

Theil's *H* Index measures the difference between the diversity of the city and the weighted average diversity of individual neighborhoods. Diversity scores for each neighborhood and the city as a whole are influenced by the relative size of racial groups, while the overall index is influenced by the relative size of each neighborhood, giving more weight to larger than to smaller places. Both types of weighting are key to understanding the political implications of segregation. We should expect the effect of segregation to be most pronounced when minority groups are unevenly dispersed across geographic units *and* represent a substantial share of the population.

Theil's *H* has a number of other useful qualities. Importantly, for understanding city politics, Theil's *H* can be calculated for more than two groups at a time (unlike either the dissimilarity or isolation indices). Additionally, it is the only index that obeys the principle of transfers in the multi-group case - the index declines when a minority resident (theoretically) moves to a neighborhood with fewer minority residents (Reardon and Firebaugh 2002). Finally, as will be discussed in the next section, Thiel's *H* is additive and can also be aggregated to higher levels or decomposed into its constituent parts.

Theil's *H* Index is built from Theil's entropy score which is a measure of diversity itself

$$E = \sum_{r=1}^{R} (\pi_r) \ln \frac{1}{\pi_r}$$

where π_r represents the proportion of the population in racial group r (or class group r if the index is measuring class segregation). The higher the entropy score, the more diverse an area

is.[48] The score ranges between 0 and the natural log of the total number of groups *R*. It is maximized when individuals are evenly distributed among the different racial groups (e.g. when

$$\pi_r = \frac{1}{R} \text{ for all } r$$

).[49] Entropy is calculated for each neighborhood individually and for the city as a whole.

The *H* Index measures the degree to which the diversity in each neighborhood differs from the diversity of the city as a whole, expressed as a fraction of the city's total diversity and weighted by the neighborhood's share of the total population.

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents total population of neighborhood *n* or city *c* and E is the entropy of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city, and 1 where all neighborhoods contain only one group.[50] This *H* Index serves as a key outcome to be explained throughout the book.

The dataset that I constructed to measure segregation is built from a number of different sources. The calculation of the *H* Index requires data on population characteristics at the sub-city level. Cutler et al. (1999) digitized sub-city demographics on race and immigration for 178 different cities from the 1890- 1950 Censuses. To this, I add available data that I encoded on homeownership from the 1900 Census and data from the Elizabeth Mullen Bogue files (1975) on

[48] Where any group's share of the population is 0, the natural log is set to zero, as is the convention in the literature (Iceland 2004).
[49] A scatterplot relating a white/nonwhite calculation of E to percent white is included in appendix Figure A1.1.
[50] In all analyses, neighborhoods are represented by Census tracts, which are relatively stable, contiguous geographic areas containing approximately 4,000 people. Most studies of segregation (e.g. Massey and Denton 1993) use Census tracts as a proxy for neighborhood (although this is not without debate, see for instance Logan et al. 2015).

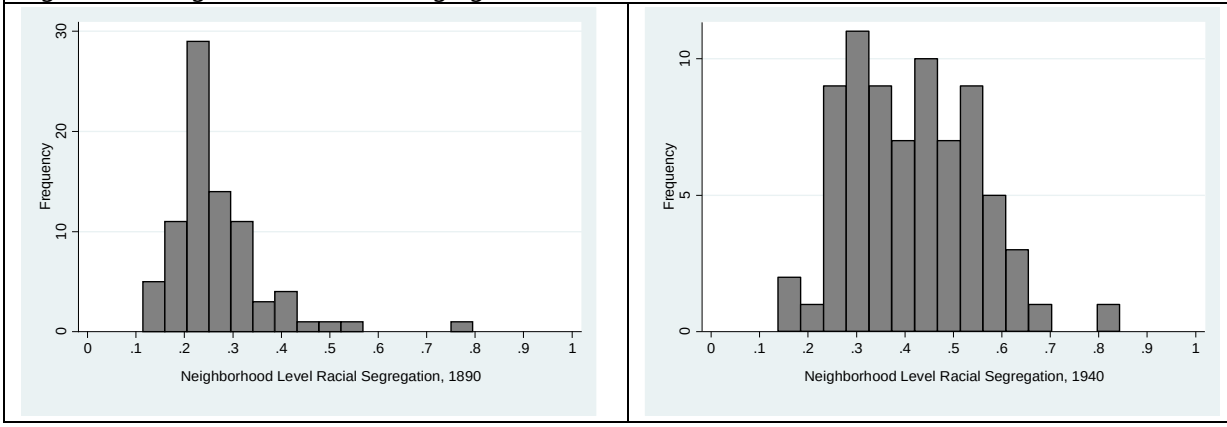
homeownership from the 1940 census.[51] For the 1970-2000 Censuses, I rely on a product developed by GeoLytics called the Neighborhood Change Database (NCDB). The NCDB matches and normalizes Census tract boundaries for each Census year, allowing for direct comparison in demographic changes across time. Finally, I add data from the 2007-2011 American Community Survey. These data allow me to create a panel dataset measuring segregation at the Census-tract level for cities and metropolitan areas for more than 100 years.

Figure 1.4 plots the distribution of racial segregation scores in 1890 and 1940, using data for the 80 cities with populations of at least 25,000 and with at least 1,000 blacks as of the 1890 Census.[52] In 1890, racial segregation patterns were similar from place to place, and generally fairly moderate – although higher than some historical analyses indicate (Cutler et al. 1999). Both features had changed substantially by 1940.

[51] The data from 1900-1940 are collected at the ward level (political units for electing city council members). Starting in 1940, the Census published tract-level data for some cities. Wards tend to be larger in area than tracts and therefore, suggest a smaller value of the segregation index without actually representing a lower level of segregation. To account for this, I adjust all ward-level estimates by a correction factor calculated using a set of 47 cities that reported both ward and tract-level data in 1940.

[52] For all figures presented in this chapter, the two groups used to calculate the *H* index are whites and all others for years 1890-1970. For 1980-2011, the groups are non-Hispanic whites and all others. Throughout the book, I calculate the *H* Index by tract-city-county-msa (Metropolitan Statistical Area). This means that cities which cross county lines end up with multiple observations. This is necessary because Census tracts are nested within counties – not cities. When presenting any analysis at the city level, I use the observation representing the largest share of the city population.

Figure 1.4: Neighborhood Racial Segregation in 1890 and 1940



Note: The white/nonwhite *H* index for 1890 is calculated using wards as the base population unit with an additional correction factor to make the data comparable to tract-level estimates. The *H* Index for 1940 is calculated at the tract level where available and at the ward level otherwise. Data provided by Cutler et al. (1999) and Bogue (1975).

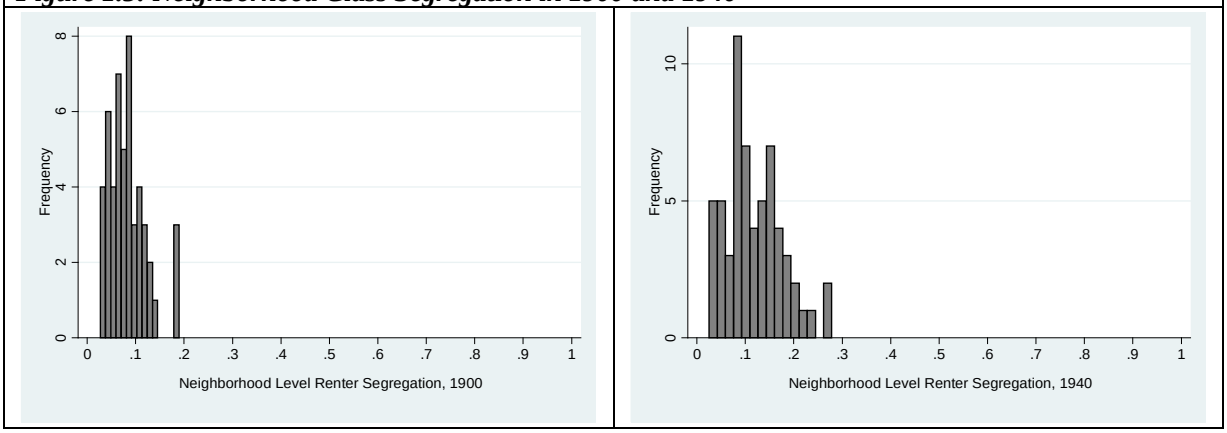
In all but a handful of cases, neighborhood-level racial segregation rose between 1890 and 1940 – on average rising 0.15, a change of about 65%. But the standard deviation is large at 0.13; some cities segregated much more intensely than others. There are many ways to consider measuring class segregation. Throughout the book I use two measures – the distribution of renters versus homeowners, and the concentration of households in the top income threshold.[53] The correlation between owner and wealth segregation is about 0.60. I rely primarily on the former measure for two reasons. First, it is available for the entire time period. More importantly, the existing scholarship indicates that it is property ownership – not wealth – which is the more important driver of local political participation and preferences (Fischel 2000, Oliver and Ha 2007). The downside of this measure is that, at an aggregate level, it is very resistant to

[53] The Census reports income categorically, not continuously; wealthy refers to the number of families in each Census tract with incomes above particular thresholds for each Census year. I use family as opposed to household income because the NCDB does not report household income at the tract level. The thresholds were determined by calculating the average family income for all Census tracts in the United States for each Census year. The wealthy threshold represents the income bin with a starting point closest to the 90th percentile of this distribution. The thresholds for each census year are: $35,000 for 1980, $75,000 for 1990, $100,000 for 2000, and $150,000 for 2011. All families with this amount of income or more are categorized as wealthy. Census tracts range from 0 to 100% wealthy, with a mean of 18%, a median of 13%, and a standard deviation of 16%.

change as the housing stock changes more slowly than demographics. Wealth segregation is a more straightforward measure of the residential divisions along socioeconomic lines, but it is only available starting with the 1970 Census and is less directly affected by city policy.

To demonstrate change over time, Figure 1.5 presents data on the renter/homeowner distribution within cities. This figure reveals that class segregation started off much lower and was more consistent from city to city as compared to racial segregation, and increased a small amount (0.037) between 1900 and 1940.

Figure 1.5: Neighborhood Class Segregation in 1900 and 1940



To determine how segregation correlates with expenditure in the pre-war period, I add to the segregation dataset the measure of *Logged Expenditures Per Capita* described in the previous section. Because segregation data are measured every decade, and expenditures in years ending in 2 and 7, I interpolate spending data. I then lag spending by five years under the assumption that demographic sorting takes time to respond to budgets. I regress *Racial Segregation* and *Renter Segregation* on the lagged *Expenditures* variable. As in the previous section, I add fixed effects for cities. This fixed effect model analyzes the relationship between lagged expenditures and racial segregation over time within cities. This accounts for variation across cities on all other dimensions that might affect segregation and spending.

Table 1.4: Correlations Between Spending and Segregation

	Racial Segregation			Renter Segregation		
	β	Std. Err	P>|t|	β	Std. Err	P>|t|
Expend. Per Capita, 5 year lag (logged)	0.100	0.010	0.000	0.026	0.003	0.000
Constant	-0.238	0.059	0.000	-0.052	0.018	0.005
N	368			179		
Number of Cities	118			56		
R^2 within	0.292			0.383		
R^2 between	0.020			0.010		
ρ	0.802			0.931		

Note: Fixed effect for cities included, but not presented.

The results, presented in Table 1.4, indicate a positive correlation between spending and segregation. The R^2 suggests that about 30 to 40% of the variation in city segregation levels can be explained by variation in the budget. Places with larger budgets were more segregated five years later compared to cities with smaller budgets up until the Second World War. For a host of reasons, this relationship would change going forward.

Suburbanization – Another Form of Segregation

Teaford (1979) argues that two conflicting forces animated city development in the late 19th and early 20th century. On the one hand, socioeconomic diversity generated an impetus for separation. As early as the mid-1800s, "the urban population was resolving itself into separate geographic spheres – factory zones, ethnic neighborhoods, upper-middle-class retreats, race track havens – and each zone sought local self-government as a means of protecting its own particular interests" (Teaford 1979, p23). This separation, Teaford shows, led to the explosion of newly incorporated municipalities. But, over the course of the next 50 years, many of these tiny new cities consolidated and/or were annexed into larger central cities for one primary reason: the provision of city services. Prior to 1900, suburban governments were simply unable to provide the quality of sewers, clean water, paved streets, uniformed police forces, and fire-fighting that

was available in the central city. As a result, as cities became more diverse, the forces of separation pulled people into different neighborhoods, but not into different cities.

However, in the period following the Second World War, America began to suburbanize rapidly (Rappaport 2005). Scholars have detailed the role that automobile accessibility (Glaeser, Kahn, and Rappaport 2008), highway construction (Nall forthcoming), federal programs encouraging home ownership (Jackson 1985), changes in the building industry, and rising incomes (Margo 1992) played in the growth of suburbs. The vast majority of people who arrived in the bucolic, grassy, neighborhoods filled with single-family homes were whites with incomes slightly (although not dramatically) higher than the median income of the central city (Cutler et al. 1999, Winsberg 1989). By about 1940, many larger suburbs were able to compete with central city service provision, thus increasing the attractiveness among residents, industry, and business to move away from the center. As Teaford (1979) explains, "while the forces encouraging unity were weakening, the forces of separatism and disunion remained powerful" (p84). Thus, in the middle of the century, central cities stopped growing politically and suburbs arose as powerful actors in the metropolitan universe (Teaford 1979, Danielson 1976, Miller 1981, Burns 1994). In 1970, more than half of all metropolitan area populations lived outside of the central city; a figure that would grow to two-thirds over the next 30 years. The rise of suburbs decoupled residential spaces from job spaces, and encouraged suburban residents to prioritize neighborhood amenities and property values in political decision making (Teaford 1979, Fischel 2004).

As they moved outside of the central city, suburbanites sought to protect their investments (high quality public goods and property values) in much the same way as their predecessors had – by institutionalizing segregation through public policies like land use

planning and zoning. Thus, the impetus toward separation in the latter half of the 20th century played out across, rather than within, city lines. The level of segregation is of crucial importance to politics. When cities are not segregated by neighborhood, district representation ensures that all residents within a particular location are likely to be provided similar services. When a district councilor wins a public park for his neighborhood all those who live nearby benefit. As the level of segregation shifts from blocks to neighborhoods, residents are more likely to lose representation. Still though, when segregation occurs across neighborhoods within cities, it is possible for residents of segregated neighborhoods to affect the delivery of municipal services through the political process. If a heavily minority neighborhood lacks a public park, residents from this neighborhood might mobilize to try to elect a mayor or city council member who is responsive to their demands. But when segregation occurs across cities, heavily minority cities have no ability to affect the distribution of public goods from neighboring white towns.

To understand how segregation patterns have changed over time, I compiled a measure of segregation that accounts for segregation both within cities and across them. In order to do this, I build on the measure of segregation presented in the previous section – Thiel's *H* Index. Theil's *H* is suited to this purpose because it is perfectly additive for nested geographies (Reardon and Firebaugh 2002, C.S. Fischer et al. 2004). In my case, census tracts are nested within cities, and cities are nested within metropolitan areas. Residents can be segregated in two ways – across neighborhoods within cities, or across cities within metropolitan areas. My measure combines these two types of segregation.

As explained above, the *H* Index measures the degree to which the diversity (*E*) of subunits differs from the diversity of a larger unit. For each Census year, I calculate *H* Indices at the two levels that are of interest – within cities and across cities. Respectively, these measure

the extent to which Census tract diversity differs from city diversity (H_{c_t}) and the extent to which city diversity differs from metropolitan area diversity (H_{m_c}). [54]

$$H_{c_t} = \sum_{t=1}^{T} \frac{P_t}{P_c}\left(\frac{E_c - E_t}{E_c}\right)$$

$$H_{m_c} = \sum_{c=1}^{C} \frac{P_c}{P_m}\left(\frac{E_m - E_c}{E_m}\right)$$

Where *P* represents total population of the tract *t*, city *c*, or metropolitan area *m*, and *E* represents the entropy of the geography ($E = \sum_{r=1}^{R}(\pi_r)\ln\frac{1}{\pi_r}$).

I combine the two indices to produce a total *H* Index for the metro area calculated at the tract level, H_{m_t}.

$$H_{m_t} = \sum_{t=1}^{T} \frac{P_t}{P_m}\left(\frac{E_m - E_t}{E_m}\right) = H_{m_c} + \sum_{c=1}^{C}\left(\frac{P_c}{P_m}\right)\left(\frac{E_c}{E_m}\right)H_{c_t}$$

To illustrate the two levels of segregation, Figure 1.6 provides images from a map of the population developed by Dustin Cable for the Weldon Cooper Center for Public Service at the University of Virginia. The map includes one dot for each person in the United States as of the 2010 Census, color coded by race (blue for white, green for African American, red for Asian, and orange for Latinos). [55]

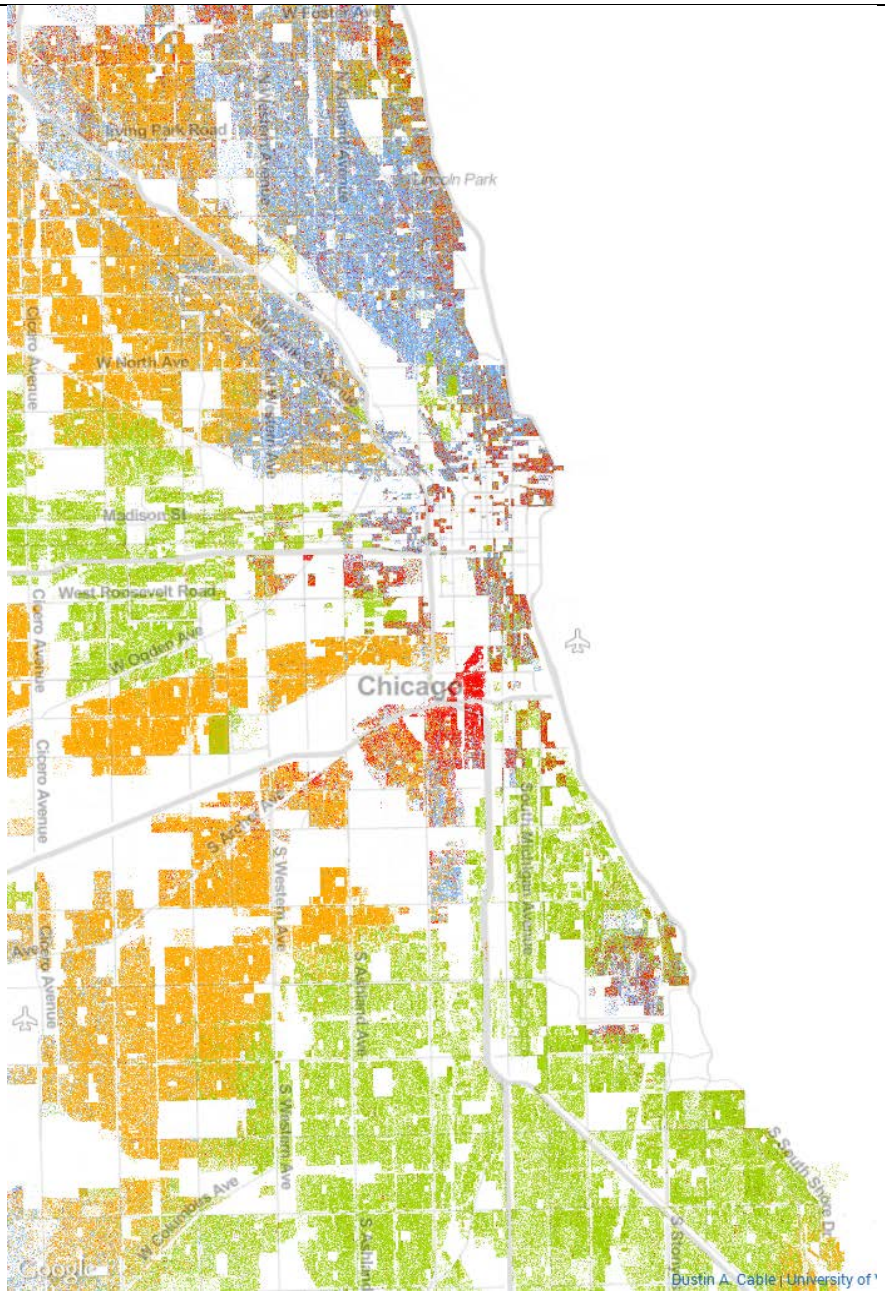
[54] Census tracts are perfectly nested within states and counties. However, in some cases, tracts cross city lines. In these cases, GeoLytics assigned the tract to the city containing the largest share of the tract population. In 2011, tracts are weighted by the share of population contained in each city. Observations are unique when defined by year, tract, city, county, and metropolitan area. Tracts located in unincorporated areas within a metropolitan area (even if they are denoted as places by the Census) are combined as a single unincorporated unit. Tracts outside of metropolitan areas are not included in the analysis. I use Metropolitan Statistical Areas and where possible, Primary Metropolitan Statistical Areas, as the highest level of aggregation (not Consolidated Metropolitan Statistical Areas which are much larger).

[55] Available at http://demographics.coopercenter.org/DotMap/index.html.

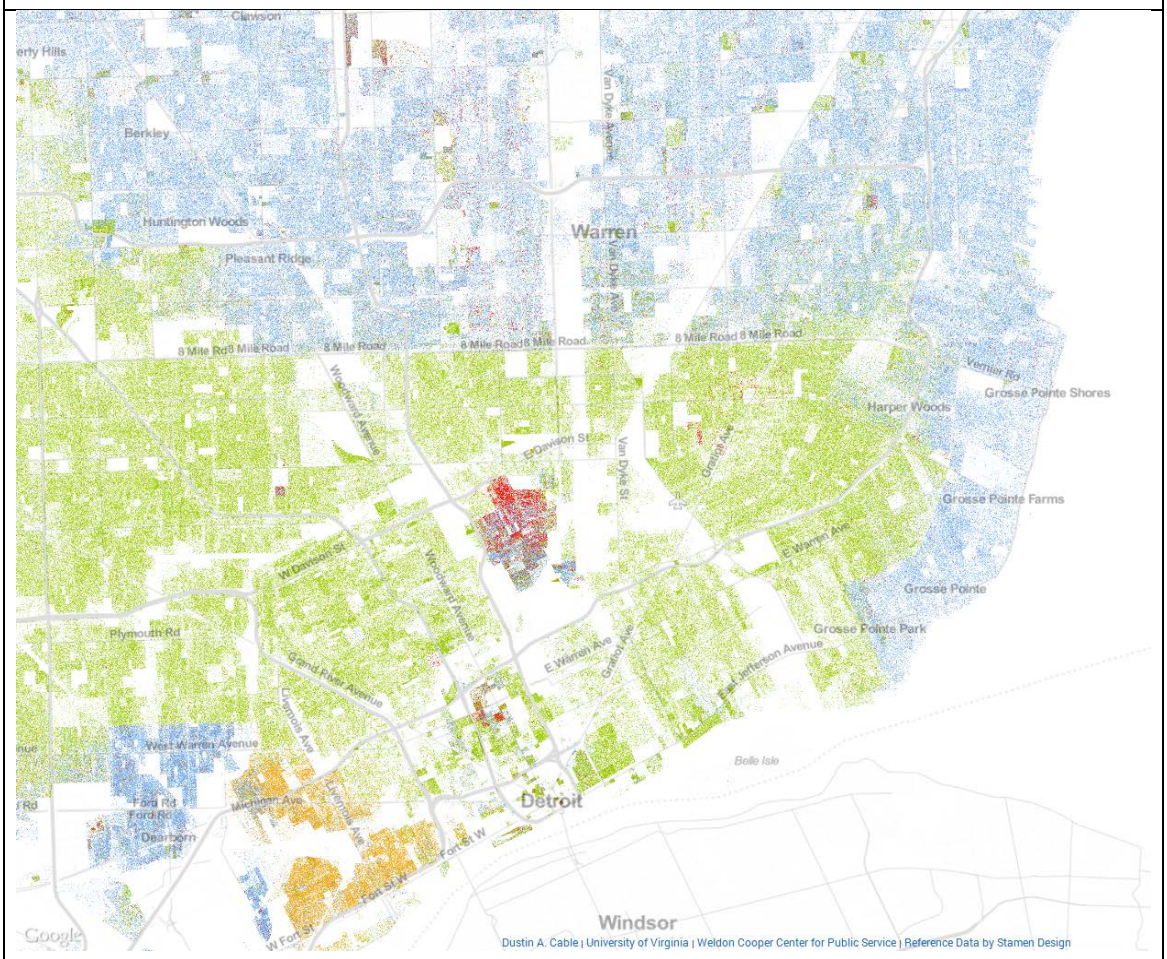
The upper panel shows Chicago, Illinois – a city in which whites are segregated from nonwhites in different neighborhoods (indicating a high amount of segregation across tracts within the city, H_{c_t}). The bottom panel shows a section of the Detroit, Michigan metropolitan area where racial sorting is much more prevalent *across* city lines as opposed to within them (indicating a high value of H_{m_c}).

Figure 1.6: Segregation Within City vs. Across Cities, 2010

Chicago, Illinois: Segregation within a City



Detroit, Michigan: Segregation Across City Lines



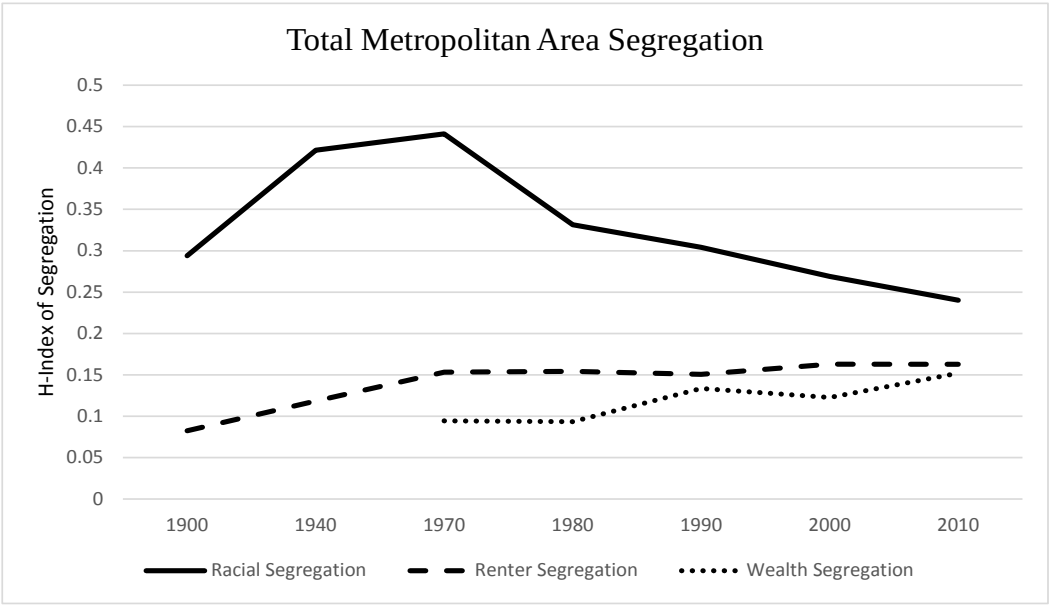
The maps make it clear that white and nonwhite residents of Chicago live in homogenous neighborhoods. Overall, the city is very segregated. The value of H_{c_t} in 2011 for Chicago was 0.379; the value of H_{m_c} (total segregation across cities) for the Chicago metropolitan area was 0.192. In the bottom panel, the neighborhoods within the cities of the Detroit metropolitan area are much more homogenous. The stark horizontal divider between the blue and green dots is 8

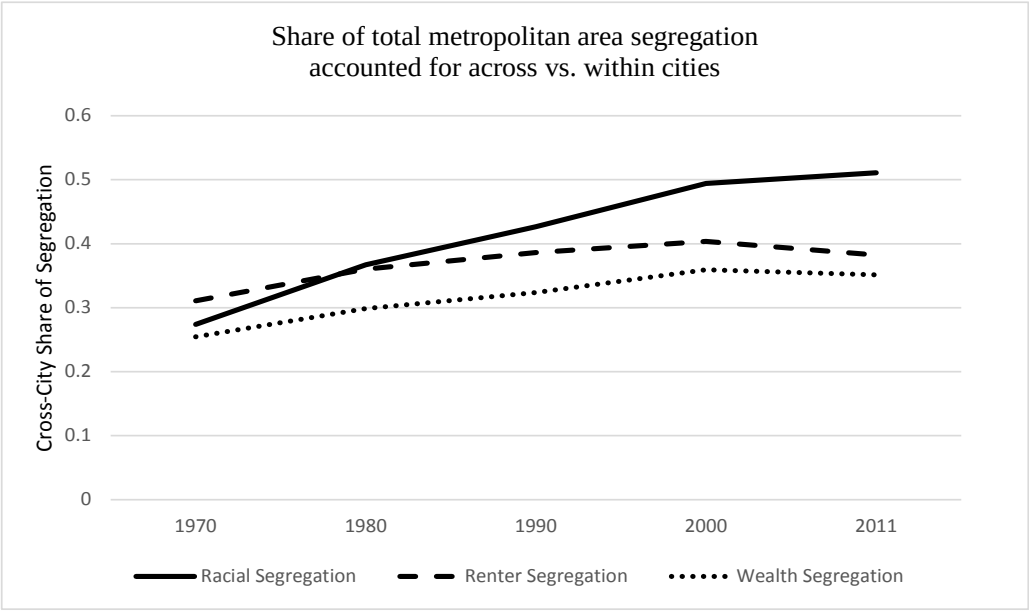
Mile Road which marks the boundary between Detroit and the neighboring ***city*** of Warren. A similar vertical division can be found on the right hand side of the picture, noting the boundary between Detroit and the cities of Grosse Pointe, Grosse Pointe Park, Grosse Pointe Farms, and Grosse Pointe Shores.[56] The value of H_{c_t} (within city segregation) in 2011 for Detroit was 0.220, while the value of H_{m_c} for the metropolitan area was 0.395.

How has metropolitan area segregation changed over time? The top panel of Figure 1.7 shows total metropolitan segregation measured at the tract level (H_{m_t}) since 1900, while the bottom panel shows the share of that segregation that was accounted for across cities rather than within them ($\frac{H_{m_c}}{H_{m_t}}$) from 1970-2011.

[56] The maps are shaded based on population density, hence the darker colors in Chicago.

Figure 1.7: Changing Metropolitan Segregation Patterns





These figures reveal that by 1970, racial segregation had peaked and begun to decline, while class segregation began a slow ascent. Between 1970 and 2011, in nearly every

metropolitan area in the United States, neighborhood segregation was exchanged for city level segregation along both race and class lines. The figures also show that historically, class segregation was much lower than racial segregation, but by 2011, the indices had converged substantially. The relationship between race and class segregation also increased over time. In 1990 (the earliest date for which I have data on all 330 metropolitan areas), the correlation between race and renter segregation was 0.19. It rose to 0.32 in 2011. The correlation between race and wealth segregation increased from 0.46 to 0.51 over this same period. The link between race and wealth segregation across city lines is even stronger; it was 0.70 in 2011. This tightening link between race and class is driven by changes in both race and class segregation, both within and across cities. However, these remain distinct demographic patterns.

Chapter 2: Local Government Action Contributes to Segregation 1900-1940.

Segregation along both race and class lines grew in tandem with the growth of cities (Meyer 2000). Race, ethnic, and class enclaves developed as urbanization brought white migrants, African Americans, and immigrants to cities (Teaford 1979). At the turn of the century, the predominant pattern of segregation occurred building by building, block by block, and sometimes several blocks by several blocks, but typically not by neighborhoods (Logan et al. 2015, Meyer 2000). Many cities featured multiple racial, ethnic, and class enclaves (Kellogg 1982, Rabinowitz 1978). In Philadelphia, for instance, about 40% of the black population lived in central city wards (4th, 5th, 7th, and 8th); but there were significant clusters of black homes in the 14th, 15th, 20th, 22nd, 26th, 27th, 29th, 30th, and 37th wards too (DuBois 1899). In Atlanta blacks lived in "Shermantown, Mechanicsville, Hell's Half Acre, Bone Alley, and Pigtail Alley," as well as "Darktown….Peasville…and Jenningstown," (Rabinowitz 1978, p106). By 1940 neighborhoods had become much more homogenous. So, while the residential location of people of color and the poor was nearly always restricted, the pattern of segregation changed during the years leading up to the Second World War. In this chapter I argue that local governments played a role in producing this change. Governments adopted zoning and other policies that created or reinforced segregation in service to business elites and white, property-owning constituents who were demanding a larger, more active city government.

In the very large social science literature on the causes and maintenance of race and class segregation, the contributions of local government are given limited attention.[57] Boustan (2012) concludes, "the most important [factor in the generation of residential segregation] appears to be individual choices of white households" (p318). Hayward (2013) agrees, arguing that restrictive

[57] The contributions of the federal government, on the other hand, are well covered (Jackson 1985, Massey and Denton 1993).

covenants were, "a more significant mechanism of racial segregation," than local government activities (p59).[58] Other scholars combine private and public actions into a single theoretical construct. For example, Cutler et al. (1999) provide evidence of "collective action racism" which involves, "specific policy instruments such as racial zoning or restrictive covenants prohibiting sales to blacks, or organized activities such as threatened lynchings or fire bombings that discourage blacks from moving into neighborhoods" (p476). Similarly, Dreier et al. (2004) associate racial zoning laws with biased real estate codes of ethics, racial steering, insurance redlining, and white violence concluding that, "racial segregation thus stems from the routine practices of the private real estate industry" and the spontaneous choices of urban residents "as well as from government policy" (p 120).

The role of government was important. For one thing, using the state to engage in promote restrictive collective action is qualitatively different than arranging segregation privately. Marshalling the power of city government institutionalizes prejudicial behavior and denies victims recourse. As Abrams (1955) explains, "passions and prejudices…unsanctioned by government…exhausted themselves" (p206). But when democratically elected local governments developed policies promoting segregation they became, "instruments of oppression against minorities" (p207).

Furthermore, while prejudicial attitudes and behavior were widespread during this period, government action was more variable. Understanding where and when local governments worked to create segregation along both race and class lines helps to clarify where segregation was likely to become entrenched and where it was more fluid, as well as provide insight into the factors that generate consequential local policy decisions.

[58] Of course, restrictive covenants required government action for enforcement. However, they could be generated without government involvement.

In this chapter, I explore the factors that contributed to the adoption of zoning laws. I argue that zoning was enacted by political elites seeking to manage the distribution of public goods to their core supporters. To present that argument, I first offer a historical narrative detailing the adoption of zoning laws by municipal governments. Then, I present a quantitative analysis of these adoptions. I find that cities with higher property taxes and larger budgets (where more was at stake), where Republicans (who led the municipal reform movement) had greater support, and where political participation was low (and thus more likely to be heavily skewed toward middle-upper class, native, white voters), zoning ordinances were more likely to be adopted. Finally, I analyze the effect of zoning adoption on future levels of segregation. I show that cities that were early adopters of zoning went on to become more segregated along both race and class lines than similarly situated cities without early zoning plans.

The dawn of the 20th century was an exciting time for local government. Populations exploded as the industrial revolution took hold. In this environment, the limited, caretaker approach to city governance became suddenly and profoundly insufficient for maintaining health, order, and property. Monkonnen (1988) explains, "cities could have chosen to ignore sewage, crime, unschooled children, and slow transportation by simply tolerating higher disease rates, offense rates, illiteracy rates, and traffic tangles" (p4). City governments did not take that path. Instead city governments worked aggressively to shape their social and economic environments. As Chapter 1 revealed, between 1890 and 1940, cities became modern – providing services like clean water, fire protection, police patrol, and road paving. It was in this environment that cities also began to seek control over space and residents' use of space through zoning and city planning. The end goal of this control, as was true of most Progressive Era reforms, was to improve the lives and opportunities for businesses and residents – more

specifically, US born Anglo residents (Tretter 2012, Woodward 1955, Toll 1969, Brownwell 1975).

As Monkonnen indicates, it was far from obvious that cities would assert control over their environments, but the rapid spread of slums, worries about skyscrapers blocking natural light, fears of conflagration, and concern about public health threats provided early inspiration for cities to invoke their policy power of regulation over nuisances (Toll 1969).[59] Reformers debated the correct policy solutions for these ills, recommending for example, density restrictions (Woodbury 1929), stricter building codes (Power 1983), the removal of alley dwellings (Silver 1997), or policies, including increased public transportation, that would encourage suburban homeownership for the working class (Baar 1996). In many cases, typically at the urging of local chambers of commerce, city councils chose to pursue zoning – regulating the use, height, and area of buildings and land (Brownwell 1975). Zoning was sometimes, but often not, combined with general development plans for the city. While zoning became wildly popular, planning did not. This decoupling of zoning from planning was viewed negatively by some leaders of the early planning movement who thought the creation of homogenous neighborhoods would be likely to reinforce social divisions and inequality (Toll 1969). Of course, this was often precisely the goal of zoning supporters.

The rise of social Darwinism contributed to the attraction of zoning as a solution for burgeoning problems. Social Darwinists argued that the evolution of humanity would follow a process of natural selection in which the environment played a defining role. As a result, controlling the environment was of utmost importance (Toll 1969). A related body of literature

[59] A number of important court battles ensured that zoning would be constitutionally allowed for the promotion of health, safety, welfare, and morals and did NOT constitute the deprivation of life, liberty, or property (see Hayward 2013 and Toll 1969 for overviews).

came to understand race and the differences between racial and ethnic groups as biologically rooted, hence, immutable (Hayward 2013). According to this doctrine, the inherent inferiority of blacks and other people of color (Native Americans, Chinese, Japanese, Mexicans), the preservation of "race purity" demanded, "segregation and discrimination in recreation, in religious service, in education, before the law, in politics, in housing, in stores, and in breadwinning" (Myrdal 1944, p58). Additionally, scientific and medical experts as well as politicians believed that the unsanitary habits and homes of the poor and people of color spread epidemic disease (Shah 2001, p6). In combination, these new theories offered a convincing rationale for the creation of special districts to quarantine offending groups. By 1930, about half of all large cities in the US had adopted comprehensive zoning plans.

Political leaders often used threats to public safety as a rationale for legislating segregation. New York's 1916 zoning law, the first comprehensive zoning ordinance in the nation, sought to limit the health threat posed by skyscrapers which blocked natural light and so, contributed to the spread of tuberculosis (Toll 1969, p154). Because immigrants and Blacks were viewed as disease carriers, segregating them was a typical goal of zoning. In San Francisco, the first city to segregate explicitly on the basis of race, whites had grown increasingly paranoid that Chinese residents were spreading diseases like smallpox and tuberculosis and in 1890, enacted an ordinance that required all Chinese residents and their businesses to move, within 60 days, to the section of town which had been set aside for, "slaughterhouses, tallow factories, hog factories, and other businesses thought to be prejudicial to the public health or comfort" (McClain 1996, p224). In Baltimore, segregationists agreed that, "blacks should be quarantined in isolated slums in order to reduce the incidents of civil

disturbance, to prevent the spread of communicable disease into nearby white neighborhoods, and to protect property values among the white majority" (Power 1983, p301).

The belief that zoning would create stability in property values was widely held and generated strong support from land owners, commercial organizations, bankers, realtors, and developers (Abrams 1955, Brownell 1975, Weiss 1987). Boston's first height restriction was passed in 1892 at the behest of downtown property owners who feared that the new skyscrapers would lead to an oversupply of office space and drive down property values (Kennedy 1992). In some places, this view had to be cultivated. In Los Angeles, for example, some developers were opposed to the city's 1908 zoning law because they worried it would inhibit growth (Weiss 1987). To combat such reservations, early supporters of zoning made sure to argue that their proposals would, "enhance, not detract from property values," (Toll 1969, p150). Zoning could easily have been invoked to improve the quality and health of working and lower class neighborhoods and limit land speculation (as some of the early reformers argued it should); however, "political pressures from those less inclined toward broad civic improvement" won out (Silver 1997, p24).

As zoning practices spread through the 1920s, emphasis on the enhancement of property values became the dominant argument; almost universally, it was believed that the wrong sorts of people residing or sometimes even working in an area could negatively impact property values. Abrams (1955) quotes an early real estate text which argued that, "…property values have been sadly depreciated by having a single colored family settle down on a street occupied by white residents," and another that claimed a similar effect of "unassimilated aliens." Both prescribed "rigid segregation" as a solution, "no matter how unpleasant or objectionable the thought may be to colored residents" (p159).

Aside from adding wealth to property-owning and voting residents, city governments had an even more powerful reason to protect and enhance property values – taxes (Lees 1994). An advertisement run by 5th Avenue merchants in the March 5th and 6th, 1916 editions of the New York Times argued that failure to support the city's new zoning plan would lead to "vacant or depreciated property," which would lead to "reduced taxes, leaving a deficit made up by extra assessment on other sections" (p5). Rising property values allowed municipal governments to grow without increasing tax rates. When some property values actually declined, municipal officials faced the unwelcome task of raising tax rates or cutting the budget.

As municipal governments began to spend vast sums on improving the lives and environments of residents, ensuring that the right (white/wealthy) residents benefited from the new city services became of utmost importance. This goal was clear to observers at the time. Booker T. Washington explained that, "the negro objects to being segregated because it usually means that he will receive inferior accommodations in return of the taxes he pays." Such objection stemmed from the belief that segregation would ensure that, "the sewerage in his part of the city will be inferior; that the streets and sidewalks will be neglected, that the street lighting will be poor; that his section of the city will not be kept in order by the police and other authorities, and that the 'undesirables' of other races will be placed near him." Thus, Washington concluded, "when a negro seeks to buy a house in a reputable street he does it not only to get police protection, lights and accommodations, but to remove his children to a locality in which vice is not paraded" (Washington 1915, p113-114). Frequently, white elites made arguments that taxing whites to pay for black public goods (like schooling) was "an indignity." One delegate to the Louisiana Constitutional Debate in 1864, incredulous at the proposition asked, "Shall we tear the slave away from his master and then force the master to educate him?"

(Louisiana Constitutional Debate, quoted at length in Bond 1934, p16-17). As a result, in many cities (see Chapter 3), black areas lacked municipal services such as, "paving, water, sewerage, lighting and garbage removal," (Knight 1927, p53; also Myrdal 1944).

Given that zoning was viewed as a way to both increase property values and maintain exclusivity in the distribution of public goods, it is unsurprising that Southern cities made early use of zoning to hem in expanding black neighborhoods and create clear dividing lines between white and black residential areas. Of course, the development of racial zoning in the South was part of a much larger process of reconfiguring race relations after the Civil War. During the period of Reconstruction and Redemption, whites subordinated, exploited, and killed blacks, but even in this context, the legal segregation of the races was not a foregone conclusion (Woodward 1955). [60] In fact, although Jim Crow laws were widespread, most Southern cities did not legislate residential segregation directly.[61]

Blacks being able and willing to live in white neighborhoods was a necessary (although not sufficient) condition for the enactment of legislation. Baltimore passed the first racial zoning law directed at blacks in 1910 following the violent response of white residents as black migrants moved into previously all white areas. Baltimore's ordinance prohibited whites and blacks from moving into city blocks occupied by a majority of members of the other race. Quite aware of the requirements of the 14th amendment, the Baltimore council argued (and the Maryland Supreme Court agreed), that because the ordinance placed the same limitations on both racial groups it

[60] One vivid example of the ways in which Jim Crow changed existing practice comes from New Bern, North Carolina. In 1913, the city aldermen passed an ordinance which required that all "colored bodies" buried in the public cemetery be dug up and moved to a segregated location.
http://www.newbernsj.com/article/20140209/Opinion/302099914

[61] Rabinowitz (1978) argues that the picture was different with respect to schooling. Here, segregation was immediate and unchanging after the end of the war.

was not discriminatory (Virginia Law Review 1916).[62] The vote of the city council fell along party lines with all of the Democrats in support and all of the Republicans opposed.[63] Republicans were joined in their opposition by the entire community of black residents, some real estate brokers, and white homeowners who lived in integrated neighborhoods (Power 1983). Democrats were not just responding to their white voters in their promotion of segregation. Limiting black residential location also bolstered Democratic political power by ensuring that blacks would be packed into certain wards; thereby reserving the rest of the city for Democratic control (Rabinowitz 1976).

In some places, black political power slowed or inhibited the enactment of segregation ordinances (Rice 1968). In St. Louis, an effort to pass a segregation ordinance failed because it was opposed by a significant number of city elites (including most of the city's leading Republicans, labor interests, religious leaders, and newspapers). The National Association for the Advancement of Colored People (NAACP) and the Knights of Pythias lobbied the St. Louis city government tirelessly and ultimately convinced 21 of the 28 aldermen and the mayor to vote against it. In 1912, the city went so far as to station five police officers at the house of a black family to protect them from, "possible attack by whites who resent what they term a 'Negro invasion' in their residential district" (*The Crisis* 1912 Vol 4, No 6, p272). In a low turnout election in 1916, supporters of the segregation ordinance won a city referendum and the city immediately began mapping the race of each city block. (Meyer 2000 19-21). In Kansas City, Missouri, blacks had a modest amount of political power due to their ties to the (Democratic)

[62] Although the Court agreed with the city's reasoning about the 14th amendment, it ultimately declared the ordinance unconstitutional because its provisions were retroactive thereby representing a taking by the government. (*State v. Gurry* 121 Md. 534 (1913))

[63] Republicans were generally (tepidly) supportive of black rights in Baltimore and between 1890 and 1931, six black Republicans served on the Baltimore City Council (Greene 1979). Over the course of their careers, these councilors led the city council to provide significant contributions to Baltimore's black community; but none were able to defeat the segregated housing legislation.

Pendergast machine. Despite support from a significant segment of the city's white population, a racial zoning ordinance never made it past the lower chamber of the city council (Meyer 2000).

Bacote (1955) reports that throughout the late 1800s in Atlanta, black support was frequently courted by white factions. For instance, in the 1891 election, black candidates were nominated for council positions in the 1st, 4th, and 6th wards on the Citizens' ticket (an anti-prohibitionist faction of the Democratic Party). White factions did this when they were in danger of losing the election – in 1891 the anti-prohibition Democrats were worried about a Populist victory. To prevent white factions from seeking black support in the future, the Democratic Party adopted the white primary in 1892, and the state of Georgia enacted a new constitution in 1908 which included a character requirement, a literacy test, and made property ownership a condition for registration (Bayor 1996). These changes severely restricted black participation, ensuring that white factions would only rely on white votes. The evisceration of the black electorate and black representation opened the way to the city's enactment of segregation ordinances (Key 1949, Kousser 1974, Woodward 1955).

Atlanta enacted a racial zoning ordinance on the heels of a violent race riot in 1906. The riot erupted after local newspapers reported four alleged (but never substantiated) assaults upon white women by black men. According to Garrett (1969), the riot was ignited by the sight of black passengers riding next to whites on street cars. A white mob killed and beat dozens of black Atlantans over the course of three days. A concerted organizing effort among the city's African American population followed. White elites and politicians denounced the riot, and a public/private relief fund was even established for families of the murdered victims (Garrett 1969). However, the riot also led many whites to conclude that, "separation of the races is the only radical solution of the negro problem in this country" (Charleston News and Courier,

quoted in the New York Times, September 30, 1906). Following the passage of the ordinance in 1913, all blocks in the city were assigned racial designations based on the race of the majority of current residents (Silver 1997).

Fighting racial zoning was one of the early nationwide causes to be adopted by the NAACP (Rice 1968, Meyer 2000) and due to the organization's work, in 1917, the Supreme Court ruled racial zoning unconstitutional in *Buchanan v. Warley*. In the *Buchanan* decision the justices did not seek to protect the rights of black property buyers or to prohibit "amalgamation of the races," but rather to protect the right of white owners to, "sell or lease their lands and houses to whomsoever they pleased" (Virginia Law Review 1928, p531).[64] Nonetheless, the Chicago Defender declared that the, "hydra-headed monster of segregation…was killed by the Supreme Court," and argued that the, "decision [was] a direct slap in the face to white southern oligarchy." (November 10, 1917). According to Rice (1968), it was also a, "victory for moderate whites and Republicans" (p197).

Following *Buchanan*, many cities sought to enact constitutionally defensible racial zoning plans by turning to comprehensive city plans (Silver 1997).[65] In 1914, a racial zoning ordinance was proposed in Birmingham while the *Buchanan* case was already moving through the court. A group of black attorneys convinced the Birmingham city council that they could face a costly legal battle if the Court ruled against Louisville's ordinance. In order to prevent this, and to appease white demands for segregation, the council chose instead to adopt a

[64] The Court found that the ordinance improperly restricted the rights of property owners to dispose of property. It did not challenge the separate-but-equal doctrine that was in place as a result of the 1896 *Plessy v. Ferguson* decision.

[65] San Francisco was the first city to utilize a form of use zoning for a racial purpose. In 1885, the city enacted a set of regulations for laundries operating in residential areas in an attempt to keep Chinese residents (who owned nearly all of the laundries and typically lived above them) from white neighborhoods. The law was invalidated by the Supreme Court in the 1886 case *Yick Wo v. Hopkins* in which the Court found that a law which is race neutral on its face may still violate the 14th amendment if administered in a prejudicial manner.

comprehensive zoning plan in 1926 that included racial designations for different city zones (Connerly 2005). Atlanta's 1922 revision of the zoning ordinance combined zoning categories of land use and building regulations with racial designations. For instance, the city's master zone map noted that, "unless otherwise designated on this map, all areas designated as dwelling house districts are also class H1 height districts and white race districts." Other areas were designated as "colored district and an apartment house district" or "colored district and dwelling house district."[66] In 1929, the zoning code was again revised, this time including a prohibition on occupying a home on a street where the majority of residences were occupied by persons whom the resident was forbidden to marry by law (Meyer 2000). Eventually, the court ruled against these ordinances and by the 1930s segregationists had dropped the racial designations in favor of comprehensive zoning.

As the court struck down plans that endorsed outright racial segregation, the case for other forms of zoning had been building. A series of judicial decisions established the bounds of permissible approaches to regulating the uses and size of buildings. For instance, the court determined that exercise of police power (e.g. the authority to regulate behavior and enforce order), "must be reasonably adapted to the purpose of protecting some interest of the community," (C.C.S. 1925 p417) and that nuisance regulation and other use restrictions, "must bear a substantial relation to the public health, safety, morals or general welfare" (Monchow 1928, p323). Zoning ordinances spread rapidly throughout the 1920s, particularly after the Supreme Court determined that comprehensive zoning would not require cities to compensate owners for losses in prospective land values in the 1926 case *Euclid v. Ambler Realty Company*.

[66] https://cityloci.files.wordpress.com/2014/07/6-atlanta-19291954.pdf

Zoning adoption was also propelled by the Republican-led federal government. In 1922, under the direction of Secretary Herbert Hoover, the Department of Commerce issued a template for state enabling laws in the Standard State Zoning Enabling Act. The Act was published in 1924 and a revised edition was released in 1926. Thus, while Republicans tended to oppose zoning in the South, they were frequently the drivers elsewhere. In Boston, Republicans were shut out of city government by the powerful Democratic organization, leaving them to pursue zoning laws through the Massachusetts state legislature instead (Kennedy 1992, p113).

The arguments surrounding the adoption of comprehensive zoning were broad but imbued with municipal Progressivism's race and class prejudices (Bridges 1997, Trounstine 2008). Comprehensive zoning supporters highlighted benefits such as the "adequate provision of light and air," "stabilization [sic] and protection of property values," "protection and maintenance of the home and home environment," "to apply the most up-to-date methods of sanitation and hygiene, "simplifying the problems of street traffic regulations," and the prevention of congestion (A.C. Holliday 1922, p217). By separating industrial, commercial, and residential uses into separate districts each with standard regulations regarding the use, height, and area of buildings, zoning would make, "every town, city or village a more orderly, convenient, economic and attractive place in which to live and work," (A.C. Holliday 1922, p218,). One key to ensuring high property values and orderly living arrangements was the ability for zoning ordinances to prevent noxious uses from polluting residential neighborhoods (Fischel 2001). Apartment buildings constituted one such noxious use.

In *Euclid v. Ambler*, Justice Sutherland explained that the apartment house is often a, "mere parasite, constructed to take advantage of the open spaces and attractive surroundings... interfering by their height and build with the free circulation of air and monopolizing the rays of

the sun…depriving children of the privilege of quiet and open spaces for play enjoyed by those in more favored localities…until, finally, the residential character of the neighborhood and its desirability as a place of detached residences are utterly destroyed. Under these circumstances, apartment houses, which in a different environment would be not only entirely unobjectionable but highly desirable, come very near to being nuisances." (p394-395).

In allowing the protection of single-family home neighborhoods, *Euclid* laid the groundwork for the long-term shift from a country segregated by race to one that became increasingly segregated by income. In the early 20th century, race and income were so strongly overlapping that denying apartment buildings in a neighborhood of single-family homes would also largely prohibit blacks and many immigrants from residency. Making this point, Bruno Lasker, editor of Survey Magazine asked:

> "Why, in this country of democracy, is a city government, representative of all classes of the community, taking upon itself to legislate a majority of citizens – those who cannot afford to occupy a detached house of their own – out of the best located parts of the city area, practically always the part with the best aspect, best parks and streets, best supplied with municipal services and best cared for in every way? Why does it deliberately 'segregate' the foreign-born who have not yet become sufficiently prosperous to buy or rent a home under building regulations which preclude the possibility of inexpensive development and construction?" ("Unwalled Towns," *The Survey*, Volume 43, 1920, p677).

Lasker suggested that the answer to his question was the dominance of politics by wealthy property owners who sought to employ, "public power for the purpose of protecting sectional interests" ("The Issue Restated," The Survey, Volume 44, 1920, p278). Segregation enforced via zoning was a means to accomplish this end. In cities like Chicago, Kansas City, and Los Angeles, some of the most powerful voices in support of zoning were homebuilders and real estate boards who stood to gain monetarily from segregation (Gotham 2000).

With such wide-ranging positive effects for powerful interests, it is easy to see why zoning became so popular. Yet, by the close of the 1920s, many cities had not yet adopted zoning plans. I have argued that zoning was a tool that enables elected officials to make it easier to limit the distribution of public goods to certain constituents and to ensure high property taxes, and that it was successfully implemented where zoning supporters had political power. In order to provide more systematic evidence of this argument, I collected data on all of the cities that enacted *zoning ordinances* between 1900 and 1930. I gathered racial zoning information from several reports including Rice (1968), Connerly (2005), Silver (1997), and numerous issues of the NAACP's *Crisis Magazine*. To encode general zoning plans, I drew on an article published in *The American City* by Norman Knauss in 1929, which listed the years that zoning ordinances were enacted. Knauss reports having sent a survey to all municipalities with the authority to enact zoning. His list includes 768 municipalities that reported having an ordinance. I coded the city year in which zoning was enacted as a 1 and years leading up to that date as a 0. Cities exit the analysis once they enact zoning. Cities that were included in the Census but had no zoning law by 1929 are coded 0 for the entire time period. Zoning is my dependent variable. To these data, I merged city spending and demographic data culled from the Census (which are described in Chapter 1).

My primary independent variables are per capita total *Expenditure* and *Property Taxes*. I log the total expenditure variable because the data have a strong rightward skew. I expect both of these variables to be positively correlated with zoning. Where spending and property taxes were higher, local officials would have a greater incentive to protect the existing distribution of public goods and the total tax revenue. I include two additional political variables – the county-level *Republican presidential vote share* (linearly interpolated for non-election years) and county

level *Turnout* of age-eligible voters.[67] Republican vote share is a rough proxy for the degree of support for regulatory policy, of which zoning was an example. I expect that greater Republican support will be associated with a higher likelihood of implementing zoning – except in the South. A range of voting restrictions were in place throughout the time period under consideration (Keyssar 2000) and I include the turnout of the age-eligible population to capture the permissiveness of the electoral environment. This measure is preferable to including state level laws like the poll tax or literacy test because it allows for sub-state variation in the electoral setting. Generally, higher turnout is associated with greater participation of the poor and people of color (Hajnal 2010); populations that both tended to be opposed to zoning plans and stood to lose from their implementation. Thus, I expect that where turnout was higher, the likelihood of enacting zoning was lower.

A wide range of alternative explanations for the adoption of zoning were proposed by contemporary observers and later analysts of the movement, many of which are correlated with the political factors I seek to test. Writing about racial segregation laws, Woodward (1955) argues that the economic depression at the end of the 1890s led to "aggression against the minority race" (p81). To account for this possibility, I include a measure of the share of the total population that was *Unemployed*, linearly interpolated from the Census of Population and Housing. Fischel (2004) claims that zoning adoption followed the invention of trucks and busses, which made it feasible for businesses and apartment buildings to be built in residential and suburban areas, away from rail lines. I include per capita spending on *Roads*, which include street paving, street cleaning, and street lighting to capture differences in vehicular accessibility. In the "History of Zoning," Gordon Whitnall explains that, "the practice of zoning began…when

[67] This denominator includes men over the age of 21 until 1919 and both women and men over the age of 21 in 1920 and later elections.

the concentration of population in cities began to be pronounced" (1931, p2). The "urge for zoning" he goes on to say, "has arisen from the desire and the necessity to bring some order out of the chaos that has resulted from the anarchistic development of our cities." I include the *10 year rate of change* in total population and population *Density* (persons per acre) to capture urbanization. To measure threats of disease and conflagration, I include per capita spending on *Health care* and *Fire-fighting*.

As described above, contemporary supporters of segregation ordinances often asserted the protection of white, single-family neighborhoods as the primary goal. To measure the social threat of black and foreign populations, I include the share of the population that is *Black*, *Foreign Born White*, and *Foreign Born Non White*. To measure the threat of lower-income (apartment dwelling) populations I include the share of the population *Renting* their homes. To capture the presence of noxious industry that might be better contained in a zoned city, I include the share of the employed population working in *Manufacturing*. This variable also captures an argument presented by Connerly (2005): that industrialists preferred to maintain segregated cities in order to dampen the threat of union organizing across racial lines.

Many scholars (e.g. Woodward 1955, Myrdal 1944, Blumer 1958) understand segregation as a mechanism to bolster hierarchical racial control, as social distance may preserve the relative status advantage of whites. For instance, Wade (1967) argues that segregation was, "rooted in the white's need for discipline and deference," and that it, "provided public control to replace dwindling private supervision of the master over his slave" (p278). If this is the case, we should expect that cities with existing patterns of segregation would be most likely to institutionalize the practice. It is also possible, however, that cities with high levels of segregation would have had no need for legislation (see Silver 1997 on Roanoke). To adjudicate

between these two possibilities, I include a dummy variable coded 1 if the city had *Segregated Schools*. This variable is encoded from Johnson (2015) who characterizes states as requiring segregation, permitting segregation, prohibiting segregation, or with no segregation statutes. My variable is coded one for states that require segregation, .5 for states permitting segregation, and 0 for all others. Bobo, Kluegel, and Smith (1997) argue that the political institutionalization of Jim Crow ideology was driven by the needs of the Southern economy, particularly the exploitation of black agricultural labor. On the other hand, Godsil (2006) suggests that whites with a significant stake in retaining a large black laboring class may have opposed racial zoning, as such ordinances might lead black workers to leave the city. To account for either possibility, I include for the share of the workforce employed in the *agricultural sector*. If Bobo et al.'s theory applies to zoning, we would expect a positive relationship between agricultural dominance and zoning. We'd expect the inverse if Godsil is correct.

My observations represent 4293 city-years from 240 cities. All spending data are inflation adjusted and linearly interpolated. Census data are linearly interpolated as well. I run logistic regressions with errors clustered by city. I include fixed effects for region, which means that these comparisons are all within the same area of the country. That is, the regressions analyze the effect of city expenditures on the adoption of zoning in each of four regions – West, North, Midwest, and South. Column 1 shows the base model with no controls. Column 2 includes all of the above-described controls. In Column 3, I change the dependent variable to focus on racial and comprehensive zoning. Here, the dependent variable is coded 1 when the city adopts either race zoning or comprehensive zoning and is coded zero otherwise. In this analysis, I present an interaction between Republican vote share and region to show how party

politics differed in the South. These results are presented in Table 2.1 and summary statistics are shown in appendix Table A2.1

Table 2.1: Effect of Local Political Factors on Zoning Implementation

	Column 1		Column 2		Column 3 Race and Comprehensive Zoning Only	
	β	P>|z|	β	P>|z|	β	P>|z|
Expenditure $ Per Capita (logged)	0.787	0.008	1.255	0.000	1.354	0.000
Property Taxes $ Per Capita	0.052	0.000	0.049	0.007	0.072	0.000
Presidential turnout	-2.094	0.005	-3.18	0.001	-2.639	0.015
Republican Vote Share	5.133	0.000	5.249	0.000	11.292	0.002
% For. Born White			-4.645	0.011	-5.797	0.003
% For. Born Non White			-24.709	0.011	-26.98	0.065
% Black			-2.162	0.359	-3.398	0.177
Highways $ Per Capita			-0.330	0.027	-0.292	0.047
Health $ Per Capita			0.234	0.482	-0.322	0.505
Fire $ Per Capita			0.224	0.203	-0.052	0.759
Density			-0.006	0.637	-0.010	0.499
% Renters			2.136	0.170	5.743	0.001
% Employed in Manufacturing			2.643	0.049	3.361	0.027
% Employed in Agriculture			5.527	0.000	6.735	0.000
10 year population growth rate			-1.355	0.026	-2.242	0.001
School segregation			1.276	0.068	1.150	0.115
% Unemployed			5.338	0.052	5.788	0.073
Midwest	-0.621	0.019	-1.567	0.000	0.442	0.860
North	-0.883	0.000	-1.788	0.000	1.868	0.441
South	0.313	0.349	-1.628	0.056	4.287	0.089
North * Rep. Vote Share					-1.069	0.786
Midwest * Rep. Vote Share					-4.805	0.207
South * Rep. Vote Share					-8.347	0.030
Constant	-8.436	0.000	-8.073	0.000	-15.241	0.000
N	4293		3514		3687	
R^2	0.123		0.178		0.170	

Note: Logistic regressions; Robust Standard Errors clustered by city

Table 2.1 offers strong support for my claim that cities with greater public goods expenditures and more property tax revenues were more likely to implement zoning ordinances. With all else equal, shifting from the minimum per capita expenditure (about $4) to the maximum (about $476), changes the probability of adopting a zoning ordinance from 0.004 to 0.15. Similarly, cities with the lowest property taxes per capita (about $2) rarely adopted zoning ordinances, while those with the highest taxes ($67 per person) had around an 18% chance of implementing zoning. Where turnout of the voting age population was higher, zoning was less likely to be adopted. This result supports Toll's (1969) claim that, "the demand neither for zoning nor for planning had grown out of any widespread outcry in the cities of the United States" (p199). Zoning adoption appears to have been led by the Republican Party, except in the South, where Republican voting strength limited the likelihood of adoption of comprehensive and racial zoning ordinances.[68] These data fit the historical narrative presented above well.

In addition, many of the control variables suggest interesting patterns. For instance, there is no evidence that larger racial and ethnic minority populations drove zoning adoption. Nor did greater threats to public health or conflagration increase the likelihood of zoning. Contrary to Fischel's prediction, zoning was not more common in cities with more spending on roads. Economic factors appear to have played a more important role. Zoning adoption was more likely in cities with higher unemployment and with greater shares of the workforce employed in manufacturing and agriculture. It was also more likely in cities with more renters (particularly in the case of comprehensive and racial zoning). This conclusion is bolstered by a secondary analysis in which I add a measure of renter segregation in 1900 for 42 cities. Where renters were

[68] Cities with reformed institutional structures were not more likely to adopt zoning. In fact, nonpartisan cities were somewhat less likely to adopt. This effect is largely driven by cities in the South where nonpartisan laws may have advantaged Republicans.

more segregated from homeowners, zoning was much more likely to be implemented. This finding suggests that homeowners were more supportive of zoning measures when they lived in more defined neighborhoods to protect. It is also clear that zoning ordinances were much more likely to be enacted in places that had a preference for segregation. Where segregated schools were the law, cities were more likely to adopt zoning. In additional analyses I find that cities with marked segregation at the turn of the Century, particularly in the South, were also more likely to adopt zoning. These results support the contention that zoning was a mechanism used to reinforce existing racial hierarchies. In the next section I provide evidence that this was precisely its effect.

Zoning Generates Segregation

As Chapter 1 revealed, race and class segregation existed prior to the introduction of public policy measures that would separate residents and land uses. The history of private mechanisms producing segregation is well understood (e.g. Jones-Correa 2000, Meyer 2000, Burgess 1994, Myrdal 1944). Blacks, immigrants, and the poor tended to live in areas that were removed from native white middle class residents for a variety of reasons. Rabinowitz (1974) explains, "some of the housing segregation was voluntary: Negroes sought proximity to their jobs, welcomed the freedom from white surveillance, and enjoyed the company of other blacks" (p98). More important was "black poverty, which limited housing options" and "white pressures to keep blacks out of their neighborhoods" (p98). Restrictive covenants, clauses written into property deeds specifying restrictions on the use of the property, were widely used to bar undesirable neighbors from occupying properties starting in the late 1880s (Fogelson 2005). Mortgage discrimination and real estate steering were institutionalized in the early 1900s (Helper 1969). However, Hayward (2013) explains that the problem with relying on black poverty or

restrictive covenants to maintain segregation was that the market was susceptible to encroachment, requiring coordination and constant vigilance against potential violators (Brooks 2002, McAdams 2008). Marshaling the power of municipal governments to restrict land use offered developers and property owners the promise of a protected investment.

Evidence indicates that zoning adopted in the early 1900s followed patterns created by private actors (Burgess 1994, Tretter 2012). Writing in 1929, M. T. Van Hecke explained, "zoning programs are frequently influenced by restrictions in deeds. Where a very substantial area has been set aside for a high type use through the medium of deed restrictions, and that area is sufficiently large and geographically distinctive, zoning officials ordinarily recognize the character of the development and classify that section accordingly, so that the objectives of the statutory and deed restrictions are the same" (p420). Both supporters and opponents of zoning argued that the new laws would simply reinforce patterns produced by the market. Supporters, like Robert Whitten, creator of Atlanta's post-*Buchanan* comprehensive zoning plan, claimed that zoning would serve to lessen racial antagonism and economic loss by making the future of development more predictable as it enforced existing segregation patterns (Toll 1969 p262). Opponents suggested that zoning would add unnecessary (and some argued, unconstitutional) regulation when restrictive covenants were perfectly suited to the job of preserving neighborhoods and property (Virginia Law Review 1928, Ellickson 1973, Hayward 2013 pp118-119, Denzau and Weingast 1982, Berry 2001).

Aside from freezing private decisions in public policy, zoning also had the potential to generate race and class segregation through implementation. Ostensibly, zoning is undertaken in the interest of the city as a whole, but this, "depends entirely upon the way in which the work is done" (Van Hecke 1929, p414). This is because zoning, as an administrative task, requires

innumerable small decisions by municipal officers who may, consciously or unconsciously, bias outcomes toward some groups and away from others. E.T. Hartman (1925) explains, "chief among the problems are the granting or refusal of permits in accordance with the law, the decisions of the board of appeals in appealed cases, and appeals from either or both by interested parties" (p162-163). As is true of any regulation, zoning serves political purposes (Denzau and Weingast 1982). The discretion inherent in applying zoning laws meant that local officials could deny permits to builders who sought to house nonwhite or poor families and/or make exceptions for developers serving white and upper class residents (Bayor 1996, Meyer 2000). Abrams (1955) explains, "those who build for whites can get a modification pro forma. But the moment an unwelcome group appears, the officials stand firm" (p210). Until 1949, the Federal Housing Administration officially encouraged the use of zoning to generate race and class segregation (Stearns 1962). Valuators were instructed that, "the best artificial means of providing protection from adverse influences is through the medium of appropriate and well-drawn zoning ordinances" (Federal Housing Administration 1936, *Underwriting Manual*, Part II paragraph 227). Zoning was understood to protect locations "against declines in value or desirability" (section 306(2)) by preventing the, "infiltration of business and industrial uses, lower class occupancy, and inharmonious racial groups" (paragraph 229).

As Berry (2001) notes, providing evidence of the effects of zoning on segregation has proved challenging because zoning is ubiquitous today.[69] But as the first section of this chapter revealed, in the first decades of the 20th century, zoning adoption was variable. I argue that this variation shows that early zoning adopters became more segregated cities – even accounting for the degree of segregation that existed when zoning laws were adopted. My dependent variables

[69] Berry (2001) takes advantage of the lack of zoning laws in Houston and their presence in Dallas to show that private controls – particularly covenants – produce the same outcomes as zoning laws.

in these analyses are *Change* in the level of *Race* and *Class segregation* between about 1900 and 1970. More specifically, I subtract the level of segregation at the earliest point in my dataset from the 1970 of segregation of non-Hispanic whites and renters. The earliest measures for racial segregation are from 1890, 1900, or 1910. For renter segregation, the earliest measure is 1900 for most cities.[70] As explained in Chapter 1, the segregation of renters is an imperfect measure of class segregation – but it is the only measure that allows me to capture change over time.

My primary independent variables are drawn from the data described for Table 2.1. I expect that racial segregation will be most closely linked to racial zoning and comprehensive zoning (as the historical discussion indicated), while class segregation will be tied to all forms of zoning. In the analysis of racial segregation, my independent variable is a dummy variable noting whether a city adopted either a race based or comprehensive zoning ordinance in the period 1900 and 1930. These *Early Zoning Adopters* are coded 1, and cities that did not adopt racial or comprehensive zoning are coded 0. In the analysis of renter segregation, cities are coded 1 if they adopted any type of zoning ordinance between 1900 and 1930 and zero otherwise. I control for the *Change in City Population* between the earliest point of measurement for each city and 1970. Table 2.2 presents these results.

[70] I have data in 1900 for 49 cities. To increase the number of usable observations, I include the level of renter segregation in 1940 for 14 additional cities. The correlation between renter segregation in 1900 and 1940 is .8676. The results are nearly identical (though less precise) using only the data from 1900.

Table 2.2: Zoning's Effect on Race and Class Segregation

	Change in Racial Segregation 1900-1970		Change in Renter Segregation 1900-1970	
	β	P>|z|	β	P>|z|
Early Zoning Adopter	0.133	0.001	0.036	0.061
Change in City Population	0.000	0.002	0.000	0.000
Constant	0.057	0.103	0.026	0.181
N	88		63	
R^2	0.198		0.222	

Note: OLS Regressions

The results in Table 2.2 are striking – cities that were early adopters of zoning ordinances grew more segregated over the next 50 years compared to cities that were not early adopters. Around 1900, cities that adopted zoning had very similar racial segregation rates to non-adopting cities (0.265 for adopters and 0.287 for non-adopters). By 1970, cities that adopted early zoning ordinances had segregation levels about 10 points higher on average (0.489 compared to 0.390). Zoning also exacerbated renter segregation. Cities that were not early adopters saw about a 4 percentage point increase in renter segregation between 1900 and 1970 compared to an 8 percentage point increase in cities with zoning.

Furthermore, zoning had significant consequences for property value inequality (as its promoters had hoped). To measure property value inequality, I created a *Property Value Gini Index* built from median home values at the census tract level in 1970. Cities in which all census tracts have very similar 1970median home values have a low score on this measure, while cities that witness inequality in property values from neighborhood to neighborhood have a high score. Regressing the property gini on the dummy variable for early zoning adoption, including state fixed effects produces a coefficient of 0.09 (SE=0.003). Cities without early zoning had an average 1970 property gini of 0.04, compared to 0.13 among early zoning adopters. This difference is greater than a standard deviation on the gini index.

Of course, zoning was not the only mechanism available to local governments to promote race and class segregation. One of the most successful strategies of directing residential locations without force was the placement of segregated amenities. Austin, Texas was a pioneer in this practice. The city's 1928 comprehensive zoning plan found that, "the Negroes are present in small numbers, in practically all sections of the city, excepting the area just east of East Avenue and south of the City Cemetery. This area seems to be all Negro population" (page number). So, the plan recommended that, "all facilities and conveniences be provided the negroes in this district, as an incentive to draw the negro population to this area." This strategy would, "eliminate the necessity of duplication of white and black schools, white and black parks, and other duplicate facilities for this area" (Koch and Fowler 1928, p57). Soon after the adoption of the plan, Austin's city council pursued this approach, providing a park, school, and sewer connections for African Americans only in this one section of the city. The council went on to duplicate the strategy for Latinos (Tretter 2012). In the 1940s and 50s (as I discuss in Chapter 4), the siting of segregated public housing followed a similar pattern.

Another tactic cities used to shape minority residential patterns was the use of eminent domain and the placement of public improvements. Abrams (1955) reports, "Sites abutting Negro developments have been acquired for railroad stations, incinerator dumps, urban redevelopment, public housing projects, roads, and similar improvements. These improvements sometimes tend to cut off the minority area from the rest of the city and stem the expansion of its living space" (p212). Such decisions became increasingly frequent as the federal government provided funds for redevelopment. As I show in Chapter 4, cities that spent more urban renewal dollars also became more segregated.

Cities also engaged in several strategies that enhanced/protected private decisions generating segregation. Chief among these was the refusal to deploy police forces to protect blacks from white violence when they sought to buy or rent homes in white neighborhoods. In many places, police routinely prevented the poor and people of color from setting foot in wealthy white areas at all (Meyer 2000, Myrdal 1944).[71] In some places, city governments took actions to aid the effectiveness of private deed restrictions (Hirsch 1983). For example, the mayor of Baltimore established a special Committee on Segregation to help coordinate deed restrictions in white neighborhoods. The committee included the city's building inspector, representatives from the health department, real estate agents, and neighborhood improvement association members (Meyer 2000).

Conclusion

This chapter has provided the first piece of quantitative evidence along with qualitative historical references that suggest that local governments influenced patterns of segregation by taking into consideration public goods provision as well as the wishes of wealthy business elites and white property-owning constituents. Local governments institutionalized prejudicial behavior and promoted segregation through the use of zoning ordinances.

Political elites enacted zoning ordinances in order to control the distribution of public goods in the city. They justified their zoning and segregation legislation with the argument that the poor and minorities had habits that were harmful to public health. One of the main goals of zoning ordinances was to create property values that were stable; this was highly supported by influential groups including home and landowners who did not want "others" settling in their

[71] As was the case with zoning, the use of police to support segregationists was variable. For instance, Meyer (2000) reports several examples of police providing support for black residents in New York City, St Louis, and Baltimore.

areas and decreasing the value of their investments. Local governments had no objections to keeping the property values high and stable, as this allowed them to refrain from raising taxes.

One major consequence that resulted from enacting zoning ordinances was that cities that adopted them early became more segregated in terms of both race and class lines. When cities restricted land use and the location of specific buildings, this created areas that were homogenous, leading to the reinforcement of inequality and social divisions.

In 1917, the Supreme Court ruled that zoning ordinances were indeed unconstitutional. This led many cities to turn their attention to comprehensive city plans and other forms of zoning that did not make outright segregation obvious. New comprehensive city plans were fueled by continuing race and class prejudice, and influenced the long-term shift from racial segregation to segregation by income level.

The historical references presented in this chapter support the argument that local government politicians used zoning as a mechanism to control the distribution of public goods towards their supporters and away from others, as well as create and maintain high property values in their cities. Zoning was an implemented effectively in areas where those in favor of zoning had political power to turn racial and class prejudice into legislation. Cities that were early adopters of zoning ordinances grew to be ten percent more segregated over the following fifty years than did cities that were not early adopters. The results also illustrate that zoning ordinances doubled the amount of renter segregation. In these early adoption cities, property values would also become more unequal by 1970.

Local governments used zoning ordinances as a mechanism to solidify, through institutionalization, existing racial hierarchies and prejudice, and this practice has had long-lasting effects. When cities could have used zoning to enhance the life of all residents, local

government officials catered to the private interests of their supporters and utilized policy tools including the placement of segregated amenities, public improvements, eminent domain, and redevelopment funds to protect and increase property values. The consequence of these practices was the generation of long-standing race and class segregation and prejudice.

Chapter 3: Inequality in Public Goods Provision, 1900-1940

Throughout the first decades of the 20th century, neighborhoods became increasingly homogenous along both race and class lines. By 1940, white/nonwhite segregation had increased by an average of 63%, while renter segregation increased by 54%.[72] Chapter 2 provided evidence that cities pursued race and class segregation in an effort to ensure the protected delivery of public goods to constituents with political power – namely land owners, realtors, developers, and white homeowners. Segregation served this goal because both local public goods and local political representation have a spatial component. While it is difficult to deny particular households access to sewer lines or a local public park, it is much easier to deny particular neighborhoods. Thus, as segregation geography shifted, so too did public goods inequalities.

Nothing about the existence of residential segregation necessitates inequality in service provision; it only makes it easier to produce if it is what city officials prefer to do. In fact, early planning advocates often argued that taking race into account when developing city plans was the key to *protecting* black communities and ensuring that they received, "all necessary municipal services – paving, city water, sewers, electricity, fire, and police protection…" (Knight 1927, p137).[73] While it was clear that public facilities would be separate, some planners insisted that there would be, "equal opportunities and facilities" (Virginia Law Review, 1928, p526). In most places though, inequality was the norm as, "housing segregation…permit[ted] any prejudice on the part of public officials to be freely vented on Negroes without hurting whites" (Myrdal 1944, p618).

[72] As described in detail in Chapter 1, renter segregation remained at lower levels than race segregation throughout this period.
[73] Knight, Charles. 1927. Negro Housing in Certain Virginia Cities, Publications of the University of Virginia Phelps-Stokes Fellowship Papers, Number 8

As Abrams (1955) explains, "though often merged into a single neighborhood, the ghetto was not always a slum nor the slum always a ghetto….the slum-ghetto was created when those of a single ethnic minority group lived not only in a ghetto but also in bad housing" (p76). Local governments contributed to the development of slum-ghettos by providing worse city services to neighborhoods populated predominantly by certain groups. Myrdal (1944) explains that the argument offered in support of these unequal allocations was the (erroneous) belief that whites paid all of the taxes, and so were therefore entitled to all of the benefits. It followed that, "whatever [Negroes] get is a charitable gift for which they should be grateful" (p336).

Over the long run, this pattern of government behavior contributed to the development of negative stereotypes about the people who lived in the slum-ghetto (e.g. that racial minorities or the poor, "*cause[d]* the deterioration of the places in which they live[d]" Hayward 2013, p64, emphasis in original). This is what Glenn Loury (2002) refers to as a "politically consequential cognitive distortion" because the disadvantage observed among a group of people is assumed to be, "intrinsic to that group when, in fact, that disadvantage is the product of a system of social interactions," which then leads observers to be opposed to policy solutions or systemic reform (p26). It was in the early part of the 20th century that the foundation for continuing inequality in the 21st century was laid. By building inequality into the physical landscape, cities added, "unprecedented durability and rigidity to previously fragile and fluid [social] arrangements" (Torres-Rouff 2013, p257).

In Chapter 2, I provided evidence that political power in the hands of opponents could slow or inhibit the enactment of such policies. A similar pattern existed with respect to the distribution of benefits. In many cities, political participation of lower socio-economic status groups and racial minorities limited the degree to which public goods were allocated unequally.

When these groups were able to assert political power through voting strength or in official positions, they received more benefits from municipal governments.

In this chapter, I show that between 1900 and 1940, neighborhoods that were identifiably poor or inhabited by minorities were allocated lower quality services including road paving, public health efforts, and sewer extensions. I draw on detailed data from Atlanta, Birmingham, Baltimore, Boston, Chicago, and Philadelphia to provide this evidence. Where relevant, I discuss mobilization efforts on the part of underserved groups that limited the extent of unequal allocation. I also show that in the case of sewer connections, this inequality persisted into the latter half of the century. Using data from all places included in the Census in 1970, 1980, and 1990, I provide evidence that where minorities and renters were more concentrated (e.g. in more segregated cities) they were less likely to be connected to public sewers.

A common argument promoted in the literature, as early as the 1930s, was that class, not race, was the more important determinant of inequality. A 1932 report commissioned by President Hoover stated, "These conditions of Negro housing in our cities are not the result of any willful inhumanity on the part of our society. On the contrary, they merely emphasize the present shortcomings of our individualistic theory of housing…The Negro's housing problem is part of the general problem of providing enough housing of acceptable standards for the low-income groups in our society" (Johnson 1932, p.viii). Myrdal (1944) also argued that, "in the North there is little, if any, direct discrimination…What inequality there is in the Negro's consumption of public services in the North is due mostly to poverty, lack of education, and other disabilities which he shares with other lower class persons in the region" (p335). Thus, the belief that blacks endured worse conditions than whites solely because of their lower socio-economic status, was widespread. As will be shown throughout this book, this was not true in

either the historical or modern period, regardless of the measures used or the region studied. Race and class exert powerful, independent effects on distributional outcomes.

Jim Crow and Public Goods Inequalities

Until the mid-1950s (and in some places long after), many Southern (and some Northern) cities generated inequalities in public goods by segregating access directly and then underfunding nonwhite services. Of all of the public goods residents sought to secure, none was as important as schooling. As of 1947, all southern states, along with Arizona, Indiana, Kansas, and New Mexico required or allowed segregation of schools (CQ Researcher 1947). Until the mid-1930's, about 75% of public school revenues were completely locally derived (Snyder 1993).[74] In the post-war period state and then later, federal government contributions rose. According to the data described in Chapter 1, localities spent an average of $103 (in 2012 dollars) per capita on schooling in 1902, representing about 35% of total expenditures. Per capita spending rose dramatically over the next 25 years (to $203 in 1927), but not as quickly as other expenditures. In 1927, schooling represented about 31% of local budgets. Until (and in some places even long after) *Brown v. Board of Education* was decided in 1954, racial segregation in schools was generated directly – that is, *residential* segregation was not needed to

[74] Technically, most schools in the United States are governed by approximately 13,000 independent, single purpose governments called school districts, rather than by cities. Not only are the governments that provide schooling and garbage service different entities, with separate budgets and separately elected officials, they do not often share the same boundaries. Today, only about one quarter of cities over 50,000 people have boundaries that are coterminous with a single school district (Fischel 2007). However, the 1902 Census Statistics of Cities reports that, "In most cities [included in the report] the schools are under the control of the city government, or of a school district, practically coterminous with the city" (p21). In his study of modern district boundaries, Fischel (2007) confirms that older cities are much more likely to have coterminous boundaries. It is for this reason that I include a discussion of schooling in this section. The figures cited in this paragraph combine revenue and expenditure for the municipality and the district as reported by the Census. However, it is not proper, even during this early period, to think of expenditures on schooling as being exchangeable with expenditures on other types of services. That is, increasing school spending did not directly impact funds available for policing, although one might imagine a theoretical budget constraint that the voters could impose on all governments. Due to a lack of clarity both theoretically and statistically, for the most part, I do not consider school district revenue and expenditure as part of the municipal budget in the remainder of this book.

ensure that whites and Blacks attended different schools. This was true in both the North and South. As one observer explained, "contrary to the general impression, this doctrine [of segregated schools] is of Northern and not of Southern origin. It originated in fact in the Quaker state of Pennsylvania and the abolitionist state of Massachusetts, and; although it repudiates any implication of a superior and an inferior race and insists on equal opportunities and facilities…" (Virginia Law Review 1928, p526). Litwack (1961) found that, "by the 1830s, statute or custom placed Negro children in separate schools in nearly every northern community" (p115).

In 1912, the Census reported expenditure data on schools separated by race in 40 communities. Unsurprisingly, white schools were better funded than black schools. I estimate that these cities spent about $4 per white resident and about $2.6 per black resident (in 1912 dollars).[75] However, the ratio of spending in black to white schools differed by region. While Northern black schools were not, as the Virginia Law Review implied, equally funded – it was the case that the disparities were greater in the South. For cities in the Midwest, the ratio was 0.846, compared to 0.685 in the Northeast, and 0.573 in the South.[76] School enrollments were also lower among black children. For the 1902-1903 school year, about 56% of black children were enrolled in school in Southern states, compared to 72% of white children (DuBois and Dill 1911, p24).[77] In some places with substantial black populations, no black schools were provided

[75] This is an estimate because I used linear interpolation to estimate the total white and Negro population in each city in 1912. The figure represents the total amount of funding for white and Negro schools reported by the Census divided by my population estimates.

[76] It is important to note that these data only represent a fraction of the communities with black schools or significant numbers of black school aged children (see discussion on page 122 in Financial Statistics of Cities Having a Population of Over 30,000: 1912). The 40 communities included in this special Census report spent less overall on schooling compared to other communities (about $3.6 per capita vs. $4.8 per capita). Compared to data reported in DuBois and Dill (1911), these figures appear to understate the discrepancy in funding between black and white schools.

[77] W.E. Burghardt DuBois, PhD and Augustus Granville Dill A.M., editors, The Common School and the Negro American: Report of a Social Study Made Under the Direction of Atlanta University, No. 16.

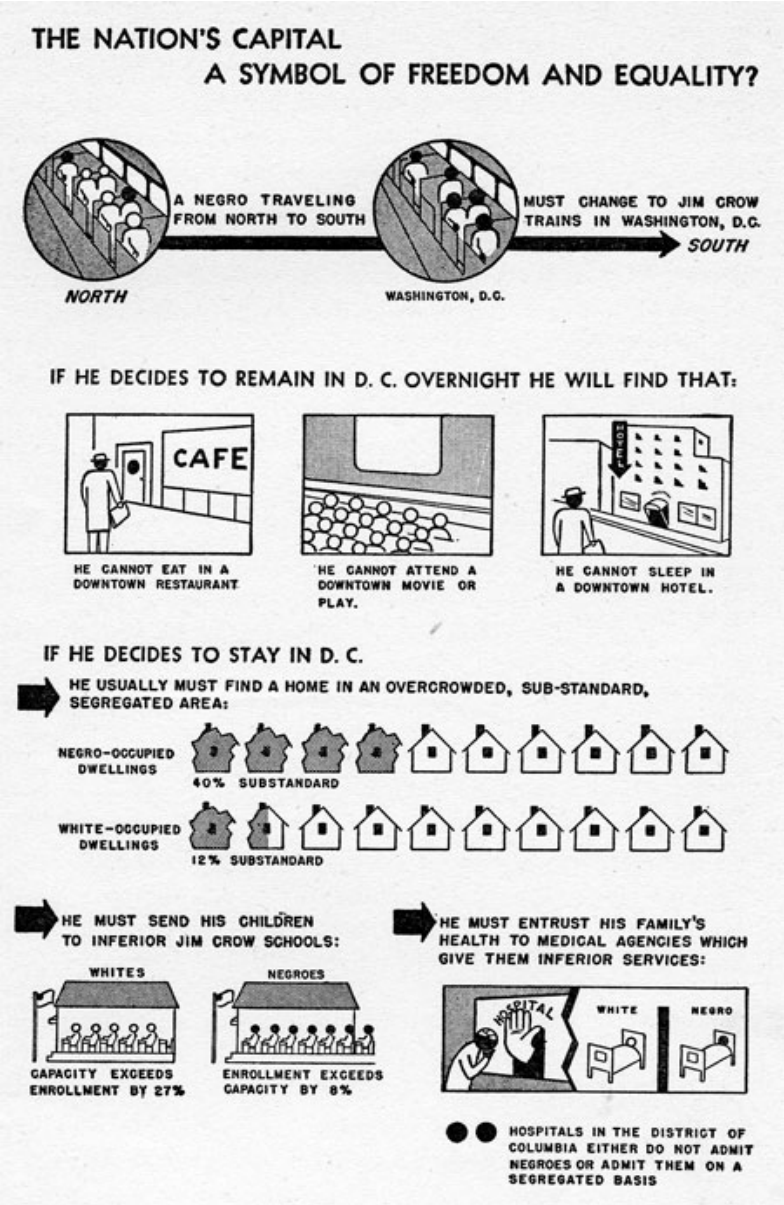
at all (Dubois and Dill 1911). Indeed, as Rabinowitz (1978) has argued, segregated schools actually represented an improvement in many communities because the alternative was complete exclusion – not integration.

Black schools had fewer teachers per child, shorter school years, and inferior physical infrastructure (DuBois and Dill 1911, Myrdal 1944). Teacher pay also differed substantially. For instance, in 1908 Georgia, the average teacher salary for whites was $45.47 compared to $26.37 for blacks (DuBois and Dill 1911). Despite similarly sized populations of white and black school children, Atlanta provided only 15 black grammar schools in 1920 compared to more than 40 grammar schools for white children. But not all white schools were treated equally. Schools serving poor whites (largely immigrants) were also, "older, less well equipped and often more overcrowded" (Myrdal 1944, p338).

Everywhere, blacks paid property taxes that were used to support white schools. Myrdal (1944) explains, "whenever the proportion of Negroes in the population is high, and the standard of Negro schools is kept well below that of white schools, the white educational system can derive substantial gains from segregation. Segregation makes discrimination possible; discrimination means lower expenditures for Negro schools, and the white population thus gets a vested interest in separation" (p341). In 1917, the Negro-at-Large series sought to catalogue reasons for the increasing Northern migration among Southern Blacks. The results of the organization's survey were printed in the Atlanta Independent. The third most important reason (after unhappiness with Jim Crow laws and disenfranchisement) dealt with inequality in school funding. The survey stated, "At present Negroes pay their proportion of taxes directly and a big portion in-directly through their rents, yet Negro schools receive in some cases less than 30 per cent of their just desserts" (reported in West 1976, p14).

However, the extent of inequality differed from place to place. DuBois and Dill (1911) report that in Washington D.C., where blacks sat on the Board of Education and held an assistant superintendent position, "there is no discrimination in the pay of teachers or in the requirements for teachers or in the course of study laid down" (p32). St. Louis and Baltimore both offered black high schools during this period. A 1954 study of inequality in education funding in St. Louis found that black schools were underfunded given their enrollment, but the difference was only about 5% and teacher pay was nearly identical (Russell 1954). In Atlanta, an active chapter of the NAACP sought to mobilize black voting power to improve public services in general and schooling in particular. In spite of a series of restrictions on voting (e.g. the white primary, poll taxes, etc.), the organization was able to register enough blacks to vote to sway some elections (Bacote 1955). In 1919, black Atlantans organized to defeat a bond package that would have solely funded white schools. So, in 1921 sponsors of the referendum sought black support in exchange for a black high school (West 1976).

Schools were not the only public good that was segregated directly during this period. Recreational facilities like parks, swimming pools, bath houses, and golf courses were also designated for white use only in many Southern cities. In Atlanta, blacks had three recreational sites compared to 22 for whites (Kruse 2005, p75). In 1954, The Atlanta Urban League calculated that whites had access to one acre of park land for every 155 residents compared to one acre of park land per every 1020 black residents. As a result, black parks witnessed severe overcrowding and much more rapid degradation (Kruse 2005). Myrdal (1944) writes, "virtually the whole range of…publicly administered facilities…are much poorer for Negroes than for whites" (p335). A graphic from President Truman's Report of the President's Committee on Civil Rights (Wilson 1947) makes the point visibly:



Although Jim Crow legislation was efficient at producing racial inequality, it was not perfect. As the Truman Report explained, "Following the *Plessy* decision, the Supreme Court for many years enforced with a degree of leniency the rule that segregated facilities must be equal. Gradually, however, the Court became stricter about requiring a show of equality"

(Wilson 1947, p82). Separate-but-equal facilities increased costs dramatically (Myrdal 1944). Additionally, some public goods could not be segregated directly. Troesken (2004) argues that, "because most cities and towns installed their water and sewer systems before 1920, during an era of relatively low residential segregation, it was difficult to construct systems that underserved African Americans without also underserving whites" (p91). As a result, he finds that the delivery of clean water and sewage disposal had a dramatic effect on lowering black mortality in the South. Furthermore, in some places, white public opinion had already begun to develop in opposition to overt racial prejudice and blacks were able to make headway in pursuing integration. Boston desegregated its schools in 1855 after sustained protest by blacks and abolitionist whites (Mabee 1968). By 1947, eighteen states had enacted antidiscrimination legislation prohibiting direct segregation (Konvitz 1947). Even some Southern cities (e.g. Atlanta) witnessed a significant local voice in opposition to Jim Crow (Kruse 2005). As direct segregation became untenable and the black population of these cities expanded, residential segregation became the obvious solution. Furthermore, unlike Jim Crow legislation, residential segregation permitted the separation of poor residents from wealthy residents in addition to the separation of residents of color.

Inequalities Generated Through Residential Segregation

When the nonwhite or poor community was segregated residentially, systematic denial of services was possible. A mid-century analysis of "American Negro, Puerto Rican, and Mexican" housing in large cities found that,

> "Garbage collections, building inspections, street maintenance, and other city services are less satisfactory than in other areas. The abnormal number of rat bites in Harlem, for example, may be ascribed not only to proper upkeep but to the ready supply of uncollected garbage in the streets. Southern cities and some in the North omit street paving and sidewalks in Negro sections. In hills sections the residents try to fill gullies in

> the streets with broken masonry, worn-out linoleum, and other trash" (Abrams 1955, p74-75).

In Birmingham, a committee of Black professionals protested the city's 1923 segregation ordinance saying that while blacks "would prefer to live to themselves," black neighborhoods, "are without the necessary sanitary arrangements, street improvements, lights, police protections, and the necessary comforts given other people in the municipality" (Connerly 2005, p44).

Among the most ambitious and expensive public goods that cities developed in the first decades of the 20th century were the delivery of clean water and removal of waste through sewer systems. Sewer and water mains were built along major roads, and homes located along these lines would have had the opportunity to be connected to the system. Troesken (2004) suggests, in a detailed analysis of Savannah and Memphis, that it appears that segregation, "facilitated efforts to underprovide African Americans with sewer and water systems" (p91). I build on Troesken's case studies by analyzing sewer and water extensions over time in four cities: Baltimore, Boston, Chicago, and Philadelphia. These cities all witnessed increases in racial and renter segregation between 1900 and 1940 and had data available on sewer construction.

To measure segregation, I calculated the *H* Index (as described in Chapter 1) for Baltimore, Boston, Chicago, and Philadelphia using ward-level demographic data from the 1900, 1910, 1920, 1930, and 1940 Censuses of Population and Housing.[78] For racial segregation, I use whites and nonwhites as the groups in the calculation of the measure. For class segregation, I use renters and homeowners. Table 3.1 shows each city's *H* index in 1900 and 1940 measuring white/nonwhite segregation and renter/homeowner segregation.

[78] In order to make these scores comparable to modern data, I adjust the scores using a correction factor to make the ward-level estimates similar to the tract-level estimates used in later decades.

Table 3.1: Segregation Increased in the early 20th C					
	Race			Class	
	1900	1940		1900	1940
Baltimore	0.43	0.60		0.07	0.12
Boston	0.33	0.52		0.09	0.11
Chicago	0.46	0.84		0.09	0.15
Philadelphia	0.29	0.44		0.04	0.09

If the argument that I have presented is correct, it should be the case that nonwhite and renter households should have been less likely to have access to water and sewer connections in more segregated cities. Unfortunately, I do not have the individual-level data to test this hypothesis. However, there are also aggregate implications of my theory. If elected officials were taking demographics into account when making decisions about where to build sewer extensions, we should we witness an interactive effect between segregation and the demographics of a neighborhood. As segregation increases, it should be the case that the share of residents who are nonwhite or renters should have a more powerful negative effect on new sewer extensions.

The data I use for this analysis were provided by the Center for Population Economics at the University of Chicago in the Historical Urban Ecological dataset (which is really a collection of many different datasets and maps). The dataset (Costa and Fogel 2015) includes ward boundaries for the four cities listed above between 1900 and 1930 and also includes a map of each city's sewer system. The sewer map includes the year different segments of the system were built. Using ArcGIS, I created counts of sewer segments in each decade for each ward and combined these counts with ward-level data from the Census of Population and Housing.

Observations are arranged by ward-census year. That is, each observation represents one ward in a city in a single year. The dependent variable in the analysis is the *Total New Segments*

built in each ward before the next census. The key independent variables are the share of each ward's total population that is *Black* and the share of occupied housing units that were *Rented* (as opposed to owned). These demographic variables are interacted with each city's *H index of segregation* (for race and class respectively) in a given Census year.

I control for the *Total New Segments* built in the city in each decade to account for the slackening pace of sewer development over time. I include the *Total Segments* built in the ward at the completion of the sewer system to account for the variation in sewer needs across wards. I also control for the proportion of those total segments that were built at the beginning of each decade in the variable *Percent Built*. Finally, I account for the share of the ward population that is *Foreign Born* to account for the possibility that city governments were providing fewer benefits to immigrant neighborhoods (which would have correlated with renter neighborhoods).

An important alternative (and undoubtedly true) explanation to rule out is that black and renting residents chose housing that lacked public services because it was less expensive. I do this by taking advantage of time. I explore the pattern of sewer line extensions in each decade between 1900 and 1940 given the racial makeup of each ward at the beginning of the decade. For instance, the total number of extensions built between 1900 and 1910 is regressed on the share of the ward that was black and the share that were renters in 1900. Because the dependent variable is a count of sewer segments, I fit a Poisson regression.

I was able to obtain data at the ward-level detailing racial makeup for every decade between 1900 and 1940, but data on renters is only available for 1900 and 1940. Because ward boundaries changed dramatically in some cities between these years, interpolation is not possible. Additionally, the Census did not tabulate data on renters in 1940 for the city of Chicago. As a result, adding the proportion of renters to the models significantly decreases the

number of observations. For this reason, I present the model without the inclusion of renters in the first model, and with the proportion of renters in the second.

The results, presented in Table 3.2, reveal a powerful negative relationship between the share of the ward that was black or renting and new sewer extensions in more segregated cities.

Table 3.2: Segregation Decreased Access to Sewers for Blacks & Renters

	β	Std. Error	P>|t|	β	Std. Error	P>|t|
% Black*Racial Segregation	-21.643	1.347	0.000	-11.811	2.002	0.000
% Black	9.429	0.676	0.000	6.713	0.925	0.000
Racial Segregation	1.874	0.082	0.000	-4.645	0.424	0.000
% Renters*Renter Segregation				-48.256	8.570	0.000
% Renters				3.654	0.765	0.000
Renter Segregation				58.505	6.510	0.000
Total New Segments	0.000	0.000	0.000	0.001	0.000	0.000
Total Segments	0.000	0.000	0.000	0.000	0.000	0.000
% Built	-3.275	0.044	0.000	-2.740	0.062	0.000
% Foreign Born	0.074	0.097	0.442	-0.411	0.198	0.038
Constant	2.611	0.048	0.000	0.651	0.521	0.211
N	541			271		
Pseudo R^2	0.788			0.748		

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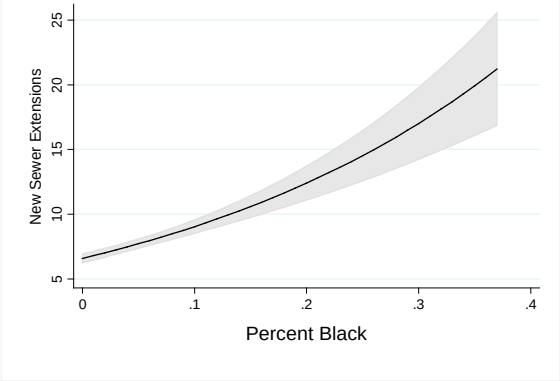
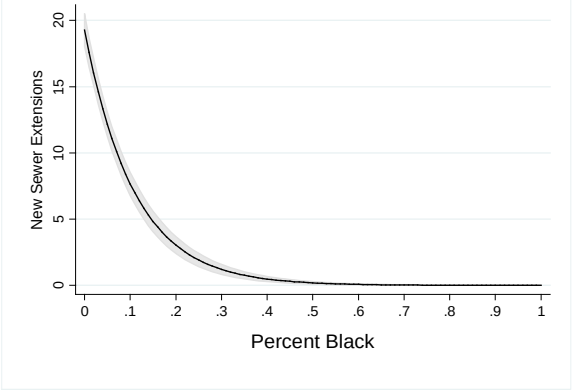
The data indicate that in more segregated cities, heavily black and renter wards were unlikely to receive new sewer lines. Figure 3.2 plots the predicted number of new sewer segments across the full range of black and renter population shares for the least and most segregated city-years in the dataset. The graph in the top right makes clear that majority black wards see no additional investment in their sewer systems. A similar pattern exists for wards with increasingly large renter populations in cities that were segregated by class.

Figure 3.2: Predicted Sewer Extensions at the Minimum and Maximum Level of Segregation

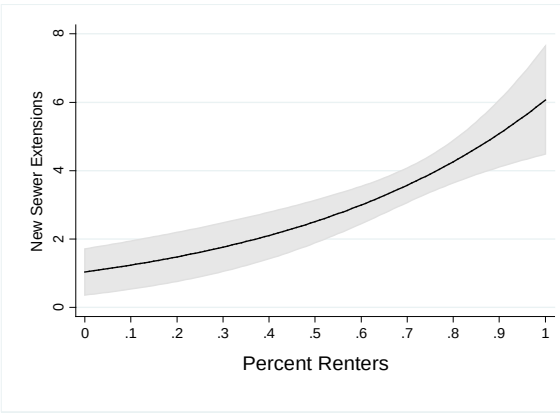
Minimum Racial Segregation (0.29)



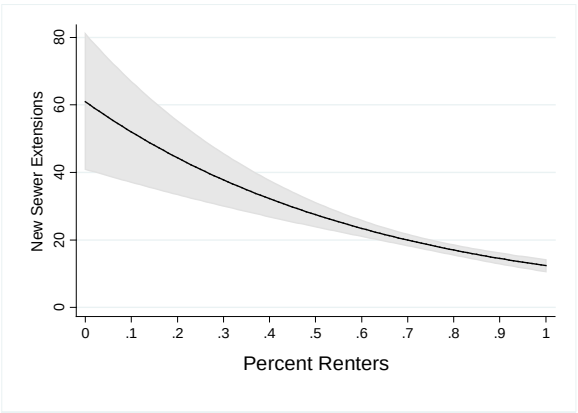
Maximum Racial Segrgation (0.86)



Minimum Renter Segregation (0.04)



Maximum Renter Segrgation (0.11)



In integrated cities however, the reverse is true: larger black and renting populations increase sewer line extensions. This may seem puzzling at first glance – but it is not. Troesken (2004) explains that the reason for this apparent generosity was self-preservation. He says:

> …discrimination in this arena was costly to white politicians and voters in at least three ways. First, given the networked structure of these systems it was difficult to deny service to African-American households and neighborhoods without also denying service to white households and neighborhoods…. Second, in a world where blacks and whites lived in close proximity, 'sewers for everyone' was an aesthetically sound strategy. Third, failing to install water and sewer mains in black neighborhoods increased the risk of diseases spreading from black neighborhoods to white ones (p9-10).

As a result, to the extent that sewer systems were built prior to rising segregation, variation in sewer system service did not disproportionately affect any demographic group. In Richmond, Virginia, neighborhood segregation actually declined between 1890 and 1930, and one contemporary observer wrote, "With the completion of the 1925 program practically the whole of Richmond was sewered and supplied with city water" (Knight 1927, p51).

In other cities, organized political action on the part of nonwhites and the poor mitigated inequalities. Bond passage in Atlanta required approval of two-thirds of votes cast and the two-thirds majority had to constitute a majority of registered voters – so by simply registering and not turning out, African Americans could ensure defeat at the polls (West 1976, Bayor 1996). In 1919, Black voters defeated a one-million-dollar bond package that was to provide, "for improvement of waterworks, a motorized fire department, erection of a museum at cyclorama, and the construction of a crematory with electricity generating facilities," after being told that, "blacks would receive no benefits from the measures" (West 1976, p13). When a new package was submitted to voters in 1921, it included $2,850,000 for water works and $750,000 for the viaduct (Atlanta Independent, February 24, 1921, p4). The mayor promised to appoint a special commission of colored citizens to advise the Bond Commission regarding the distribution of the

funds (Atlanta Independent, February 24, 1921, p4). On election day, Atlanta's "colored citizens…voted for every improvement named on the ballot" (Atlanta Independent, March 10, 1921, p4).

In some cities, sewers were built at the behest of property owners and developers. This was the situation in Birmingham and Los Angeles. In cities with this type of process, land-owners played a crucial role in the eventual sewer map. Because very few land owners were people of color, blacks in Birmingham and Mexicans and Chinese residents in Los Angeles lacked the opportunity to request sewer extensions or connections. While it might seem reasonable to explain inequality in access as the result of these economic differences, cities had other means by which to compel development. In Birmingham, sanitation and building codes were ignored in black neighborhoods (Connerly 2005), and in Los Angeles the city council ordered sewers to be built at the, "cost and expense of the several parties owning property along its route." However, they declined to compel sewer building in Sonoratown or Chinatown (Torres-Rouff 2013, p224; quoting Los Angeles City Council minutes, April 4, 1873). Because most Mexican and Chinese residents were renters, this refusal was a significant benefit extended to their landlords. As a result, in both cities, the absence of sewer and water service was concentrated in minority neighborhoods.

In this next section, I ask whether this unequal pattern of sewer development continued to affect minority and renting residents in the latter half of the 20th century. In order to investigate this question, I draw on the GeoLytics Neighborhood Change Database which matches and normalizes Census tract boundaries between 1970 and 1990. This normalization allows for direct comparison of tract attributes across time. I use this database to construct the race and

renter *H* index (as described in the previous section) for 4,566 incorporated municipalities and 800 unincorporated county areas.

The dependent variable in my analysis is the share of housing units in a given census tract that is connected to *Public Sewers*. My primary independent variables, similar to the previous analysis, are the share of the tract population that is *Nonwhite*, and the share of households that are *Renters*. These variables are interacted with each city's *H* index *of segregation* (for race and renters respectively) in each year. I control for the proportion of *Wealthy Families* in the tract (those earning incomes above the 90th percentile for a given Census year: $15,000 in 1970, $35,000 in 1980, $75,000 in 1990), the total *City Population*, and the total number of families connected to *Public Sewers* in the city. I include fixed effects for region and cluster the errors by city. The results are presented in Table 3.3 (summary statistics are in table A3.2).

Table 3.3: Nonwhite and Renter Sewer Access in Segregated Cities

	β	Std. Error	P>|t|
% Nonwhite*Racial Segregation	-0.261	0.069	0.000
% Nonwhite	0.164	0.037	0.000
Racial Segregation	0.122	0.035	0.000
% Renters*Renter Segregation	-2.643	0.854	0.002
% Renters	0.851	0.228	0.000
Renter Segregation	1.631	0.418	0.000
% Wealthy	0.254	0.105	0.016
City Population	0.000	0.000	0.000
City Public Sewer Connections	0.000	0.000	0.000
Midwest	0.053	0.013	0.000
South	-0.040	0.012	0.001
West	0.017	0.012	0.171
Constant	0.327	0.161	0.042
N	146,102		
R^2	0.327		

As was the case in the early period, between 1970 and 1990 renters and nonwhite residents continued to have inferior sewer access in more segregated cities. Of course today, overall sewer

access is high; the median census tract has 97% of homes connected to public sewers. The point demonstrated by this analysis is that both in the past and today, lack of access to public sewers is disproportionately concentrated among minority and renting residents.

Delivery of other public goods followed a similar pattern to sewer development and clean water provision. In 1900, 8,000 automobiles were registered in the United States; by 1940 the figure was 27.5 million (Federal Highway Administration 1997). But during this same period, actual spending on roads increased very little and dropped as a share of total budgets.[79] This meant that road paving distribution was an intensely political decision and different areas of the city were treated differently. One study of four Virginia cities reported, "a general lack of paving in the Negro residential areas" (Knight 1927, p53). In Los Angeles, Torres-Rouff (2013) explains, "many paved streets ran through the Anglo residential neighborhoods and commercial center but abruptly yielded to dirt as soon as they crossed into Sonoratown and Chinatown" (p226). A 1958 study of Birmingham analyzed white and black blocks in a single working class neighborhood and found that about a third of the black blocks had unpaved streets on three or four sides compared to only 6% of white blocks (Connerly 2005, p31).

As described in the introduction, mortality rates in cities during this time period, particularly the early years, were high. A budding public health movement sought to utilize government funds to address disease contraction and death. Cities created new public health departments, passed regulations regarding the storage and transport of milk, sent inspectors to stores and dairies, and engaged in large scale fumigation efforts. In all of these activities, white and homeowner neighborhoods were treated more protectively than neighborhoods inhabited by

[79] In a sample of 84 cities for which I was able to obtain data between 1902 and 1937, mean per capita road spending was $44 in 1902 (in 1912 dollars) and $43 in 1937. It reached a high of $51 in 1932. Road spending represented about 13% of city budgets in 1902 and about 8% in 1937.

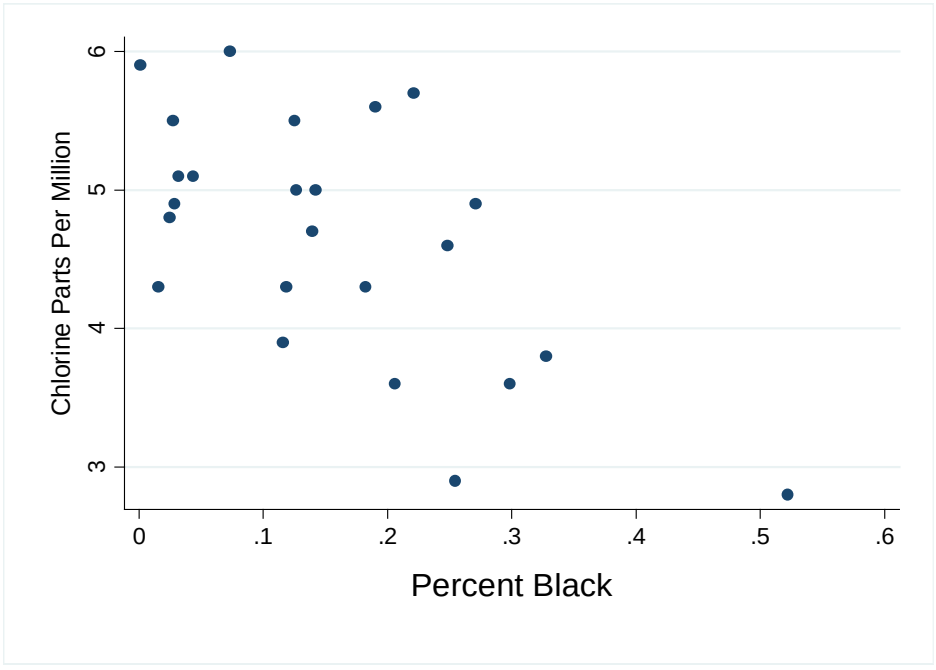
renters and minorities. In 1915, the nationwide infant mortality rate was 57% higher among nonwhites than whites. One study of 4 southern cities determined that nearly 1 of every 2 black babies died (Meckel 1990 p.142). Even still, black infants were "almost entirely" excluded from the "early part of the infant welfare campaign," (Meckel 1990, p142).

A 1914 analysis of Baltimore's Public Health department by the United States Surgeon General found that regulations were not enforced in the poorer parts of town. The report explained:

> An inspection was made by me of the stores selling milk in two of the districts of the city. One was located on the outskirts of the city in a good neighborhood…In every store the milk was sold in unbroken packages, was kept in a separate compartment of a large refrigerator and the conditions were as good as could be expected…The other district visited was of a different type altogether. It was located in the slums, among the foreign population. Here all the milk was sold in bulk under the most insanitary conditions. To make regulations here is practically hopeless. There are but three things to be done – stop the sale of milk in such places, establish a municipally controlled dairy within the district, or prohibit the sale of anything but bottled milk in original packages… (Fox 1914, p37).

In 1901, the Baltimore Health Department (reported in HUE dataset by Costa and Fogel 2015) reported an assessment of water quality in each ward. Only one ward had water that was classified as "Very Muddy" (as opposed to clear, fairly clear, cloudy, or muddy). That one ward was 52% black. The same ward also had the lowest level of chlorination in the entire city. In fact, there was a powerful negative relationship between chlorine parts per million and the share of black residents in a ward. Figure 3.3 provides a scatter plot of the data.

Figure 3.3: Chlorination of Water in Baltimore Wards, 1901



Not only were services provided differentially, but many cities engaged in a practice Rabin (1990) calls expulsive zoning: the placing of negative uses in minority neighborhoods. Kruse (2005) explains that as neighborhoods transitioned from white to black, city officials would assume that property values would fall and the area would become a slum. "Accordingly, planners and zoning committees lowered their standards for the region and began approving projects they would have routinely rejected if the residents were still white" (Kruse 2005, p74). A 1932 analysis of housing in one New Orleans neighborhood reported that, "The superintendent of the public school system used to live in this area but the white residents began to move out and then the city built a garbage incinerator over here, and all of the best whites moved out and the Negroes moved in with the poor whites," (Johnson 1932, p19). In Birmingham, city planners zoned black neighborhoods in flood plains and in industrial areas (Connerly 2005). Myrdal

(1944) reports that it was common to ignore criminal activity in black areas. As Muhammad (2010) explains, municipal authorities allowed crime to flourish in black neighborhoods as a service to white politicians and constituents. Doing so allowed whites access to prostitution, gambling, illicit alcohol and drugs while protecting white neighborhoods from the criminality. Because such operations were, "mostly owned, partially operated, and unofficially regulated by a largely white power structure" (Muhammad 2010 p.227), the benefits were captured by whites, while the negative externalities of vice were borne nearly exclusively by blacks. These strategies created conditions that lead later generations of planners to denote black areas as blighted slums, thus enabling the expulsion of blacks from these neighborhoods in redevelopment projects.

The historical record indicates that lower levels of segregation and more political power in the hands of blacks and the poor could mitigate such inequalities. Throughout the late 1880s, blacks held significant bargaining power in Atlanta city politics. Blacks were appointed to the nominating committees for city elected offices, and black votes were courted with promises of a black fire company, schools for black children, and street paving (Bacote 1955). After the white primary was struck down in 1946, blacks gained even more leverage in Atlanta politics. Black leaders had been pressing the city government for years to hire black police officers, "hoping to solve the problems caused by both the absence and the presence of white policemen" (Kruse 2005, p33), but their requests were ignored until they could marshal votes in city elections. In 1948, eight black patrolmen were hired (although they were only allowed to patrol black neighborhoods and could not arrest whites).

In Birmingham, many black neighborhoods formed active, dues-paying, civic leagues to lobby the city government for improved services. While they won a few small victories (the first city-owned park for blacks, some street paving and lighting, fire hydrant installation, sewer

extensions, and gas lines), they were mostly met with staunch resistance from the all-white government. One organization, the Harriman Park Civic League waited for four months to get an appointment with the public safety commissioner, Bull Connor. When the meeting finally occurred, Connor literally turned his back on the presentation (Connerly 2005, p221). In the late 1960s and early 1970s, as political power began to shift toward black residents, many of the requests brought by the civic leagues were finally addressed.

In Boston, Progressive Reformers attracted public support and won a series of institutional reforms between 1903 and 1913. Nonpartisan neighborhood organizations arose as powerful voices in municipal politics. The result was the consolidation of political power in the hands of middle-class homeowners (Connolly 2009) at the expense of working-class white ethnic immigrant constituencies like the Irish. However, the city was fairly integrated residentially along both ethnic and class lines during these years – and so, while political power shifted hands and the agenda changed, when neighborhoods won improvements like street cleaning and repair, playgrounds, libraries, or improved police protection, they benefitted all residents in the community, not just those with political power.[80]

Between 1914 and 1950, Boston was governed (on and off) by a staunch advocate of the poor and working classes – James Michael Curley. Curley was a machine-style politician, who was never able to consolidate a dominant citywide organization (Erie 1988). Many histories of this period note Curley's lavish attention to the city's, "working-class, ethnic neighborhoods" (Connolly 2009, p146). But the Census data from the period reveal that even the most heavily ethnic wards were actually fairly mixed. In 1930 for instance, wards ranged from 21% foreign

[80] Connolly (2009) argues that this shift in political power altered the agenda of city politics toward neighborhood improvement and away from issues that the working class prioritized like union protections and wage and pension increases (see pages 115-120) and also decreased participation among working-class voters.

born to 42%, and no ward housed more than 11% of the total foreign born population. So when Curley "ordered loans to clean and pave local streets, build a playground and bathhouse, and improve sewer and water serves" (Connolly 2009, p166) in the North End in order to woo Italian votes, non-Italian residents also benefitted.[81]

Yet, in many cities, even when residents and activists mobilized to lessen inequalities, "segregation [became] the cornerstone of the elaborate structure of discrimination against some American citizens," (Wilson 1947). Hayward (2013) explains that the, "black ghetto [was] subjected to systematic disinvestment, while collective investments in new residential and commercial structures, and in 'public amenities', such as parks and athletic facilities and well-built and well-equipped schools, disproportionately [were] channeled to places that were, first legally, then practically, restricted to those constructed as white" (p63). These inequalities contributed to a growing collective sense of whiteness and homeowner identity on the one hand (Sugrue 1996, Hayward 2013), and on the other hand, the hardening of stereotypes about the suitability of poor and nonwhite residents as neighbors. White homeowners believed that individuals who shared demographic characteristics with those who lived in disinvested neighborhoods would bring slum conditions with them wherever they lived. In 1951 and 1953, Rose Helper conducted 40 interviews with real estate agents in New York City and Chicago to learn about the, "reasons for excluding Negroes from white residential areas" (Helper 1969 p18). She reported that the agents believed that, "[white people] fear that their neighborhood will deteriorate if Negroes come because of their manner of living in other areas: they associate Negroes with the undesirable slum (dirt, noise, squalor, stealing, vice), something to be avoided

[81] One scholar (Puleo 1994) estimates that in 1920, 95% of the North End population was Italian (p116). Without detailed data regarding the exact location of Curley's benefits, it is impossible to know the degree to which they served other populations.

if possible" (p79). In response, white homeowners sought continued governmental protection of their neighborhoods. Over the next several decades they succeeded in this fight.

Conclusion

Between 1900 and 1940, America's cities became increasingly segregated along race and class lines. While renters and homeowners both became more concentrated, the most dramatic changes in segregation occurred between blacks and whites. These changes in residential living patterns changed the distribution of public goods. As cities became modern service providers, the allocation of public goods was intensely political. In the earliest years when no neighborhoods benefitted from paved streets or clean water, health and cleanliness did not differ dramatically from place to place. But as streets became sewered, paved, and lit, and as inspectors enforced building, sanitation, and health codes, some neighborhoods reaped the benefits while others, "continued to contend with dirt roads and open cesspools" (Torres-Rouff 2013, p227). As Torres-Rouff (2013) explains, "these decisions produced a city that physically imposed inequality on its citizens" (p227). Such choices would be consequential for the future as inhabitants of these neighborhoods came to be associated with poor living conditions. Today, evidence indicates that segregation is maintained by white homeowners' willingness and ability to pay a premium to live among white, educated neighbors (Cutler, Glaeser, and Vigdor 1999).

Chapter 4: City policy maintains/deepens segregation, 1940-1970

By 1940, segregation patterns in cities were well-established. The boundaries of minority neighborhoods were clearly defined and white prejudice against nonwhite neighbors was entrenched. As one Chicago realtor explained, our "firm has a policy where they won't sell to a Negro in an area where Negroes are not resident…the general public…is not willing to accept the Negro as a neighbor. That's the basis for our not selling to Negroes in this type of an area unless one Negro family is already in the block. You can't be censured then. A silly idea but that's life" (Helper 1969, p41).

The maintenance of property values was the typical explanation offered for these practices; a belief that had been cultivated by policies enacted by local governments and which quickly became a self-fulfilling prophecy. Blacks were seen as undesirable *neighbors* because the features of their *neighborhoods* became associated with individual members of the racial group. Whites came to similar conclusions about Chinese residents in San Francisco (Shah 2001, McWilliams 1964) and Latinos throughout the Southwest (Abrams 1955, Torres-Rouff 2013, McWilliams 1964). This was the case despite the fact that minorities and renters experienced poor neighborhood quality because of paltry municipal services, neglectful landlords, and the overcrowding that resulted from segregation, not from their own doing.

During the build-up of the war effort in the early 1940s, massive demographic changes rippled through the nation. African Americans moved to the North and West, and the war and agricultural industries attracted Latinos to cities and farms in the Southwest (Weaver 1948, McWilliams 1964). In the post-war period, city governments utilized policy instruments like urban renewal and the placement of public housing to prevent minority and poor neighborhoods from expanding into white areas, and to protect property values for white homeowners. At the

same time, tumultuous battles over racial integration (of neighborhoods, schools, busses, lunch counters, unions, etc.), the rising Civil Rights movement, and the passage of the Voting Rights Act, threatened to undermine white homeowners' control of the political system, distribution of city services, and ability to police the borders of their neighborhoods (Sugrue 1996, Kruse 2005, Self 2003).

A great deal of insightful, detailed historical research studying the Civil Rights movement, segregation, and suburbanization has been written about the postwar period and this chapter does not attempt to retell what we already know. Instead, here and also in Chapter 5, I focus on the role of city policy in the generation of neighborhood segregation and suburbanization. An important contribution of these chapters is to explore why, if the drivers of segregation and suburbanization are similar, do white homeowners choose one avenue of separation over another? I argue that policy control plays an essential role. When white homeowners lost the power to adequately guard their neighborhoods and dictate municipal policy and public goods distribution, suburbanization became attractive. First, I show that urban renewal was linked to increased race and class segregation in the postwar period. Then, I demonstrate that whites in racially segregated cities witnessed increasing threats to their political power, both electorally and more specifically, with regard to housing policy.

Urban Renewal and Segregation

In 1932, more than 80% of local revenues came from property taxes (Census of Governments Finance File). By the end of that year, nearly 750 homes were foreclosed every day (Gotham 2000). City government revenue plummeted. Mayors sought relief from Congress; organizing as the National Conference of Mayors and testifying in hearing after hearing about the dire need for federal subsidy (Ogorzalek, forthcoming). As part of its

response, Congress enacted housing legislation. With its first foray into this area, the 1934 Housing Act and establishment of the Federal Housing Administration (FHA), Congress had multiple goals –the reemployment of the construction industry, the shoring up of the financial sector, and the stimulation of home ownership. But these policies were *also* spurred by a commitment to residential segregation. As Gotham (2000) details, the major authors of the proposals under consideration were, "leading officials in the real estate and lending industries" (p303), most of whom, by this time, had come to view race and class segregation as a stabilizer of property values and therefore, made them a conscious goal of these policies. Thus, it should not be surprising that the FHA played a major role in the institutionalization of suburban segregation (Gelfand 1975, Jackson 1985, Massey and Denton 1993).

However, the next piece of housing legislation, enacted in 1937 as the Wagner-Steagall Housing Act, was a conscious turn *away* from these forces. The Wagner Act sought to, "provide financial assistance to the States and political subdivisions thereof for the elimination of unsafe and insanitary housing conditions, for the eradication of slums, for the provision of decent, safe, and sanitary dwellings for families of low income, and for the reduction of unemployment and the stimulation of business activity" (Wagner-Steagall Act 1937). To achieve these goals, the act established the United States Housing Authority (USHA) to, "make grants and loans to local public housing authorities, to enable them to build, own, and operate housing projects for families of low income," and importantly, to clear slums (Robbins 1937, p4). As such, the Wagner Act served as the first Congressional effort to assist in what is now commonly referred to as "urban renewal" – local efforts to address the ravages of time, revitalizing the "urban built environment" (Avila and Rose 2009, p339).

Whereas the establishment of the FHA and passage of the 1934 Housing Act were aimed at assisting those who *could* afford housing in the private market, the Wagner-Stegall Act sought to, "provide decent, safe and sanitary housing for that large group of our population who [could not] afford to pay enough to cause private capital to supply their housing needs" (Brabner-Smith 1937, p681). In addition to focusing on low-income residents, the Wagner Act also understood that, "any realistic approach to clearing slums and rehousing low income families would necessarily include a large number of Negroes as tenants" (Weaver 1940, p150). Thus, the USHA included an Office of Race Relations directed by an African American, Harvard-trained economist, Dr. Robert C. Weaver (Meyer 2000).[82] Weaver's office was charged with reviewing applications for federal funds to ensure that, "sound racial policy may be reflected in all projects" (Weaver 1940, p155). In a 1968 interview, Weaver recalled:

> The Public Housing Program was perhaps one of the outstanding examples of equity of treatment as between white and black Americans….In public housing we not only got approximately a third, as I recall, at one time of the units available to nonwhites--most of them were Negroes--we also got Negro managers, which was unheard of in places like Atlanta and Memphis and Jacksonville and in Miami. We were able in the North to get projects which were open to both Negroes and whites. This required some doing as early as 1937 to '38. These were the exceptions rather than the rules but they did occur. (Weaver Oral History 1968, p9)[83]

Reviewing Dr. Weaver's tenure, *The Crisis* (the official publication of the NAACP) reported, "As a result of his efforts and the support of USHA officials, a more fair and equitable racial policy now exists in USHA than in any other branch of the Federal Government. On the basis of need, Negroes are enjoying equitable benefits from public housing…" (October 1940, p319).

[82] Dr. Weaver was the first African American to earn an Economics PhD at Harvard. He went on to serve as the first black cabinet member as the Secretary of Housing and Urban Development.
[83] Available at http://transition.lbjlibrary.org/files/original/6404ca478ed6c3848eedaaf380acdb45.pdf

However, despite the fact that, "The United States Housing Authority…tried to set…desirable precedents in the field of practical racial relations" (Weaver 1940, p155), the seeds of segregation were embedded in the design of urban renewal; planted by the coalition that brought it to fruition.

The first of these seeds was local control. J. W. Brabner-Smith, Counsel for the Federal Housing Administration explained in 1937 that the, "problem is essentially local and should be decentralized as far as possible" (p.681). Allowing local governments to decide which land would be cleared and where new housing would be built virtually guaranteed the continuation and exacerbation of race and class segregation because white homeowners and land-oriented businesses controlled city governments and opposed residential integration along either race or class lines. Further, these interests quickly moved to ensure control of the new housing and renewal authorities created to direct and manage the process (Hirsch 1983, Sugrue 1996, Gotham 2001). Sugrue (1996) explains, "local governments had the final say over the expenditure of federal funds, the location of projects, and the type constructed" (p60).

In Chapter 3, I provided evidence that city governments underprovided city services and practiced expulsive zoning – the placement of negative uses (like garbage incinerators) in poor and minority neighborhoods. The land values in these areas were low; the environment was degraded. As a result, they were considered blighted. In the early 1930s, local realtors and bankers assisted the federal Home Owners' Loan Corporation (HOLC) in mapping property values of every block of every city in the nation (Gotham 2000). The HOLC's low appraisal of neighborhoods of color and large numbers of renters is well known (Jackson 1985, Weaver 1948). These areas too, were considered slums. In San Antonio, 82,000 Mexican Americans populated a 4-square mile neighborhood west of downtown. Many of the homes were wooden

shacks or converted horse stalls. Tellingly, the neighborhood lacked paved and lit streets, parks, and sufficient sewer capacity (obviously the doing of the local government). Annual flooding created a breeding ground for mosquitos (Fairbanks 2000). Neighborhoods like this *barrio* – predominately populated with people of color and renters – particularly those close to downtowns or homogenous white neighborhoods, were the first to be cleared (Hirsch 1983, Sugrue 1996).

At the same time, in order to preserve property values and access to FHA loans (which required racial homogeneity), white homeowners vigorously blocked the building of low-income and multi-unit housing in their neighborhoods (Weaver 1948, Sugrue 1996, Hirsch 1983). Weaver (1948) reports that even whites living miles away from proposed projects objected to their development on the grounds that their property values would be threatened. Nearly all new housing was provided on a segregated basis – that is, whites and nonwhites were not to live in the same projects (Weaver 1946). In order to provide enough units for racial minorities, and given the few sites that were available for building, many of the public housing projects were constructed as high-rise buildings – which, even at the time, were understood to be less desirable for the successful integration of people in need (Weaver 1946). Thus, as neighborhoods with large populations of renters and people of color were razed, these residents were displaced into even more densely segregated communities. In both the decisions regarding clearance and the decisions regarding the building of replacement housing, local control generated increased segregation.

The second important feature linking urban renewal to segregation was underfunding. Basil Stockbridge, Executive Assistant to the United States Building and Loan League, complained that, “it can readily be seen that the Authority’s activities will hardly scratch the

surface of the real needs of the country in eliminating urban slums and blighted areas" (Stockbridge 1938, p329). The Act required that the development of any new housing be accompanied by the razing of unsafe or insanitary dwellings, "substantially equal in number to the newly constructed dwellings provided by the project" (Wagner-Steagall Act, 1937, p5). But the new housing did not need to be located where the old housing had stood. Additionally, it was possible to raze more housing than was actually built. The lack of adequate funds meant first, that many slums remained, and second, that the number of new, affordable units was generally lower than the number cleared. Because of this, overcrowding in existing poor and minority neighborhoods worsened.

Furthermore, the receipt of federal funds required the local community to contribute funds for construction, typically in the form of land donation and property tax exemption, as well as funds for ongoing operation of the project (Levine 1941). Many cities eagerly accepted the federal dollars, but budgeted vastly insufficient amounts for the maintenance of public housing. So, even though by the 1950s most housing authorities stopped the explicit segregation of public housing tenants, and in some cases promoted peaceful race relations (Weaver 1946, 1956, Collins 2004), the degradation of the units meant that they had already become housing of last resort. Those who could avoid public housing did and preexisting segregation meant that it was whites who could most easily find housing in the private market.

As is true of all large government endeavors, the coalition in support of the Wagner Act and its later revisions was a collection of diverse, conflictual interests. These interests can be roughly categorized as those who emphasized slum clearance versus those who sought "public low-rent" housing (Ickes 1935, p109).[84] The former included business interests who held

[84] Although of course, there was diversity within these broad groups, see Marcuse 1995.

property in and/or relied on a healthy economic market in the downtown of cities, real estate elites, urban planners, homeowners, and local politicians hoping to increase the tax base (Zipp 2012, Ringelstein 2015, Avila and Rose 2009, Gotham 2001, Sugrue 1996). As one journalist representing this set of interests explained, "the housing problem is not merely one of replacing insanitary or unhealthful dwellings for large numbers of our people. More importantly, it involves the whole problem of progressive neighborhood decay, which for years has been eating like a cancer at the heart of every great city in America. The victims of this cancer are not only slum dwellers. In greater number these victims are taxpaying, home-owning families in neighborhoods from humble to well-to-do in all parts of the country" (Lewis 1937, p189).

On the other side were those concerned about the extreme housing shortages among lower-income residents, severe overcrowding plaguing minority neighborhoods, and the influence of slums on lax moral standards and community disorder (Dean 1949, Zipp 2012, Meyer 2000, Hirsch 1983). This group included many low-income and working class residents, people of color, organizations like the NAACP, institutions like the Chicago Defender, unions, and social workers (Meyer 2000, Gotham 2001, Compass 1936).

From the outset, slum clearance supporters, like the National Association of Real Estate Boards, were opposed to direct government provision of housing (Gotham 2001). However, much of the land that local elites viewed as blighted and sought to redevelop was residential, and the areas were often physically quite large. Razing the houses and assembling parcels required eminent domain, which required a clear public purpose. Public housing offered this justification, but only when *local* authorities engaged in the taking – thus necessitating local control.[85] Public

[85] In *United States v. Certain Lands in the City of Louisville* (1935) the 6th Circuit Court ruled that the condemnation of land for slum clearance by the *federal* government was unconstitutional because it did not constitute a use necessary to carry out the powers delegated to Congress. The Housing Act of 1937 thus moved to decentralize

housing advocates worried that local control over site selection and construction would exacerbate segregation (Meyer 2000), but without support from the slum clearance interests, public housing would have collapsed nearly as soon as it started for lack of funding (Marcuse 1995).

When the Wagner-Stegall Housing Act was revised and expanded in 1949 and 1954, power shifted toward the interests favoring slum clearance and segregation. Because the crisis of the Great Depression had abated, slum clearance was much more popular with voters and elites than was public housing (Fairbanks 2000, Zipp 2012).[86] As Gotham (2001) explains, these revisions, "represented the culmination of real estate industry lobbying efforts to curtail the production of public housing, create local redevelopment authorities with broad powers of eminent domain, and provide generous public subsidies for private redevelopment" (p297). By the time the last funds were allocated to local governments in 1974, the program had operated for more than 25 years as a mechanism to maintain and deepen segregation; it was termed the, "successor-weapon to the restrictive covenant and the racial zoning ordinance" (Abrams 1950). According to Collins and Shester (2013), urban renewal cumulatively resulted in the clearance of 400,000 housing units and 57,000 total acres; 300,000 families were displaced, about 54% of whom were nonwhite.[87] But, as we saw with racial zoning in Chapter 2, there was great variation in the local pursuit of urban renewal funds, and thus its effect on segregation.

To provide evidence of the relationship between urban renewal and segregation, I rely on a dataset gathered by Collins and Shester (2013). In their article, Collins and Shester (2013)

housing administration – requiring local housing authorities to be established to receive loans and grants from the federal government and engage in slum clearance and public housing construction (Freedenberg 1941).

[86] The Housing Acts were not the only mechanism cities used to engage in urban renewal, but patterns were similar with regard to other programs. For instance, Barrett and Rose (1999) provide evidence that local business, politicians, and real estate interests utilized highway construction to produce similar outcomes.

[87] Collins and Shester (2013) provide significant evidence that these measures accurately capture urban renewal activity undertaken by cities.

show that slum clearance and urban development programs had quantifiable *positive* benefits on city-level measures of income, property values, employment, and poverty rates. I seek to determine whether or not the program also increased race and class segregation. Collins and Shester's data represent all funds approved and disbursed under Title 1 of the 1949 Housing Act between 1950 and 1974. The data were gathered from the Department of Housing and Urban Development's Urban Renewal Directory. Cities applied for federal grants for particular urban renewal projects, and the directory listed the value of total approved and disbursed grants as of the date of publication. I add to these data each city's level of white/nonwhite and renter/owner segregation in 1980, measured using the *H* Index described in Chapter 1:

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents total population of neighborhood *n* or city *c* and E is the entropy (diversity) of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city (no segregation), and 1 where all neighborhoods contain only one group (high segregation).

First, I regress *Total Approved Urban Renewal Funds* (in hundreds of millions of dollars) as of 1974, on the *H* Index of *Segregation in 1950*. We should expect that cities with a strong preexisting propensity for segregation should have been the most eager applicants for federal funds. I add a series of city characteristics also measured in 1950 to account for the many demographic and environmental conditions that might have both led cities to seek urban renewal funding and be correlated with segregation. These controls include the proportion of housing units that were *Owner* occupied, *Median Home Value*, the share of housing units that were *Dilapidated*, the share that were *Built Prior to 1920*, and the share that lacked *Indoor Plumbing*. I include *Total Population*, the share of the population that was *Nonwhite*, median *Educational Attainment* of the population over age 24, the log of *Median Family Income*, the *Employment*

Rate, the share employed in *Manufacturing*, and the percentage of families with *Income Below $2,000* in 1949. These variables were all provided by Collins and Shester (2013). I add fixed effects for region, and report robust standard errors clustered by state. Collins and Shester provide data for all cities with more than 25,000 residents in 1950 and 1980 (482 in total), but I only have segregation measures for 172 observations. Tables 4.1 presents the results (summary statistics are in appendix Table A4.1).

Table 4.1: Relationship between Preexisting Racial Segregation and Approved Urban Renewal Funds

	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Segregation, 1950	2.49	0.551	0	1.205	0.321	0.001
% Owner occupied, 1950				0.004	0.005	0.456
Median Home Value, 1950 (log)				0.128	0.255	0.617
% Dilapidated, 1950				0.012	0.016	0.443
% Built Pre-1920, 1950				0.009	0.003	0.011
% Units w/o Plumbing, 1950				-0.005	0.005	0.342
Population (millions), 1950				0.706	0.098	0.000
% Nonwhite, 1950				0.005	0.006	0.422
% Employed Manufacturing, 1950				-0.002	0.004	0.539
% Employed, 1950				-0.019	0.023	0.419
Median Education, 1950				-0.028	0.062	0.655
Family Income, 1950 (log)				0.25	1.166	0.831
% Incomes Below $2000, 1950				-0.003	0.023	0.896
Constant	-0.237	0.162	0.152	-1.771	8.885	0.843
N	173			172		
R^2	0.227			0.679		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

Table 4.1 reveals that the application for urban renewal funds is strongly correlated with preexisting segregation. Those places that had a propensity for segregation were the most likely to apply for federal funding – even accounting for all of the physical factors that would have generated such applications. Topeka, Kansas, with a segregation index of 0.26 in 1950, applied for about $17.5 million in urban renewal funds over the course of the program. Kansas City, Kansas, where the segregation index was 0.54, applied for nearly $53 million. Atlanta, Georgia, with a segregation index of 0.67, applied for more than $100 million. In Richamond, VA, where

the segregation index was 0.51, city leaders only asked for $37 million. Salt Lake City, Utah with a segregation index of 0.18 applied for less than $5 million compared to Denver, Colorado's application of $83 million with a segregation index of 0.49.

Next, I analyze the effect of urban renewal funding on future levels of *Segregation* (*H* Index measured in 1980), conditional on preexisting segregation (*H* Index measured in 1950). The independent variable in these analyses is *Total Disbursed Urban Renewal Funding* (in hundreds of millions of dollars) as of 1974. I do not have data on renter segregation in 1950, so these analyses use the 1950 level of racial segregation as the control. Again, I present the models with and without demographic and environmental controls measured in 1950. Table 4.2 shows the results for racial segregation and 4.3 shows renter segregation.

Table 4.2: Relationship between Dispersed Urban Renewal Funds and Future Racial Segregation

	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Urban Renewal Funds ($100 millions)	0.073	0.021	0.001	0.073	0.029	0.014
Segregation, 1950	0.514	0.11	0.000	0.476	0.087	0.000
% Owner occupied, 1950				0.002	0.001	0.088
Median Home Value, 1950 (log)				0.118	0.043	0.010
% Dilapidated, 1950				-0.004	0.004	0.350
% Built Pre-1920, 1950				0.002	0.001	0.152
% Units w/o Plumbing, 1950				-0.001	0.001	0.165
Population (millions), 1950				-0.004	0.017	0.832
% Nonwhite, 1950				0.007	0.002	0.003
% Employed Manufacturing, 1950				0.003	0.001	0.003
% Employed, 1950				0.006	0.006	0.329
Median Education, 1950				0.007	0.014	0.642
Family Income, 1950 (log)				-0.292	0.187	0.127
% Incomes Below $2000, 1950				-0.001	0.004	0.726
Constant	0.017	0.032	0.609	0.469	1.578	0.768
N	172			171		
R^2	0.639			0.711		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

Table 4.3: Relationship between Dispersed Urban Renewal Funds and Future Renter Segregation						
	Model 1			Model 2		
	β	Std. Err.	P>|t|	β	Std. Err.	P>|t|
Urban Renewal Funds ($100 millions)	0.023	0.006	0.001	0.020	0.009	0.037
Segregation, 1950	0.005	0.032	0.889	0.016	0.041	0.700
% Owner occupied, 1950				0.000	0.001	0.703
Median Home Value, 1950 (log)				0.059	0.030	0.060
% Dilapidated, 1950				0.000	0.001	0.676
% Built Pre-1920, 1950				0.000	0.000	0.464
% Units w/o Plumbing, 1950				0.001	0.000	0.052
Population (millions), 1950				0.003	0.011	0.761
% Nonwhite, 1950				0.000	0.001	0.997
% Employed Manufacturing, 1950				0.000	0.001	0.826
% Employed, 1950				-0.001	0.003	0.715
Median Education, 1950				0.016	0.007	0.032
Family Income, 1950 (log)				0.008	0.118	0.946
% Incomes Below $2000, 1950				0.001	0.003	0.800
Constant	0.129	0.013	0	-0.591	1.130	0.604
N	172			171		
R^2	0.229			0.334		

Note: OLS regression including fixed effects for region, robust standard errors clustered by state presented.

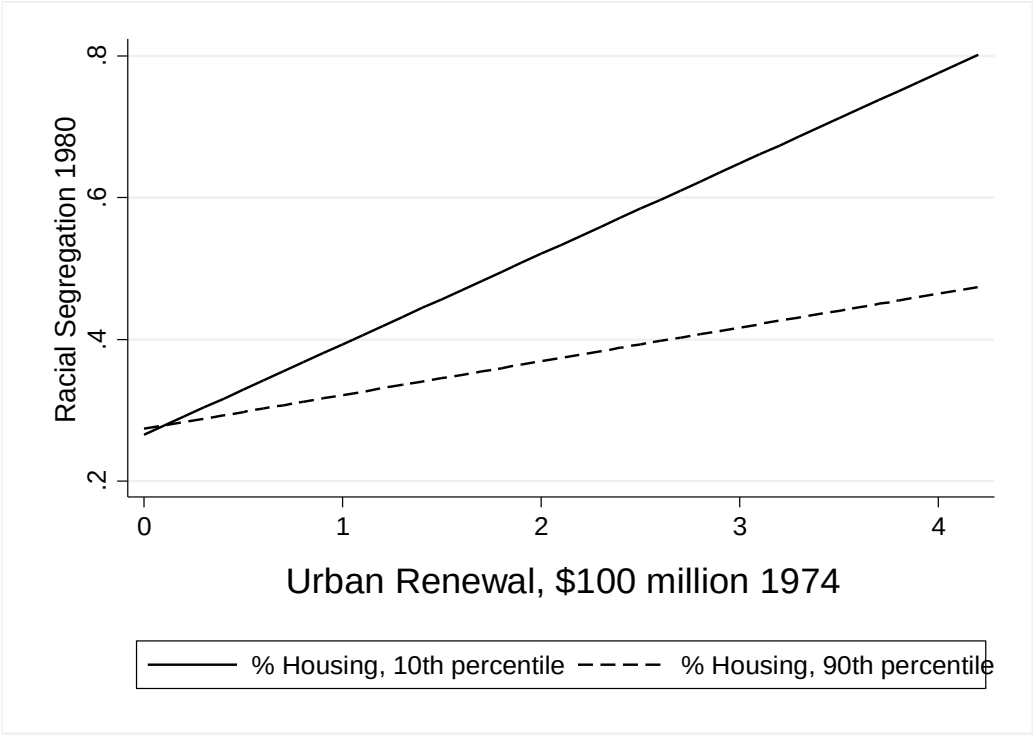
Tables 4.2 and 4.3 reveal that the vigorousness with which a city pursued urban renewal affected the level of segregation after the completion of the program (conditional on starting levels of segregation). The results are much more powerful for racial segregation than for renter segregation. Every additional $100 million in urban renewal funds is associated with a 7% increase in racial segregation, compared to a 2% increase in renter segregation.[88] As was the case for the effects of zoning shown in Chapter 2, local policy implementation is more tightly linked to racial housing patterns than class housing patterns.

This historical evidence indicates that cities varied not only with respect to their participation in the urban renewal program, but also in their investment in the ongoing maintenance of public housing. To investigate this possibility, I add to the data a measure of the

[88] Collins and Shester (2013) use an instrumental variable approach in their analysis. They estimate urban renewal funds with the number of years the city had access to the program as a result of state enabling legislation. Even more powerful results are evident when I replicate their strategy.

share of total expenditures each city spent on *Housing and Community Development Operations*[89] in 1972. I interact this variable with the measure of *Total Urban Renewal Funding* in Model 2 from Table 4.2 above.[90] I also add a control for the number of *Public Housing Units Per Capita* built under the Housing Act (from Collins and Shester) to account for differences in the need for maintenance spending.[91] Figure 4.1 reveals how urban renewal funding operated differently when cities invested in ongoing maintenance and when they did not.

Figure 4.1: Urban Renewal Interacted with Housing Operations



[89] This variable was constructed using the finance data described in Chapter 1. It is calculated as the total dollar amount spent on housing and community development minus housing and community development capital outlays, divided by total expenditure.

[90] Adding the interaction to Model 2, Table 4.3 (analyzing renter segregation) produces a similar effect that is smaller in size than the effect on racial segregation.

[91] Interestingly, the coefficient on this variable is negative – meaning that cities that had more public housing overall were less segregated. However, interacting the number of public housing units with urban renewal funding results in a positive coefficient. This indicates that slum clearance and public housing were both factors in the increase in segregation that urban renewal produced.

In cities that accepted urban renewal funds, but budgeted nothing for operations in 1972, urban renewal had a steep positive effect on racial segregation. In places that provided municipal funds for the maintenance of renewal sites, increasingly vigorous renewal expenditures had a much smaller effect on segregation. Of course, this analysis does not offer causal leverage. It is entirely plausible that the cities that were inclined to invest in maintenance had a social/political culture that led to a smaller increase in residential segregation for other reasons. Whatever the underlying cause was – cities that accepted federal funds without ongoing budget provision for housing operations segregated the most rapidly. This variation aside, generally speaking, where slums were cleared and public housing was built, segregation increased.

Yet, even while urban renewal was largely carried out to the benefit of white homeowners and land-oriented businesses, their control over public policy was not absolute; the rising Civil Rights movement threatened it significantly. As of 1960, not a single large city in the United States had elected a black mayor. By 2010, more than a third had (Vogl 2014). Changes to voter eligibility brought by the 24th amendment and the 1965 Voting Rights Act increased turnout of racial minorities and the poor during this period as well (Filer, Kenny, and Morton 1991).

I use data collected by Vogl (2014) to investigate the relationship between levels of segregation and interracial electoral competition. Vogl (2014) analyzes mayoral election returns between 1965 and 2010 for all cities that had 1960 populations that were at least 50,000 and 4% black (194 cities). His data record the race of the top two candidates (either black or not black) and their vote totals. I add segregation measures to Vogl's data resulting in complete data for

122 cities.[92] During the 1960s, only 13 black candidates sought the mayor's seat in Vogl's dataset; this number rose to 57 in the 1970s, and 84 in the 1980s. Interracial electoral competition was much more likely in more segregated cities. To show this, I regress a dummy variable coded 1 if the election was *Interracial* (e.g. featured a black candidate running against a non-black candidate) on the city's *H* Index of *Segregation* for the election year (interpolated between Censuses). I add the share of the city's residents that were *White* and the share *Renting* their homes, as well as the natural log of total *Population*, and a trend variable for the *Year* as controls. I use a random-effects logit model with errors clustered by city. I restrict the analysis to elections that occurred between 1965 and 1990 in order to focus on the post-war period. The regression includes 731 elections from 117 cities. Figure 4.2 shows the marginal effect of segregation on the probability of witnessing an interracial election, holding all other variables at their mean values.

[92] I am missing pre-1970 segregation measures for 20 cities in Vogl's dataset. I use 1970 segregation for the 36 elections between 1965 and 1970 for these places. Results are robust to the exclusion of these observations.

Figure 4.2: Segregated Cities Saw More Interracial Elections in the Post-War Period

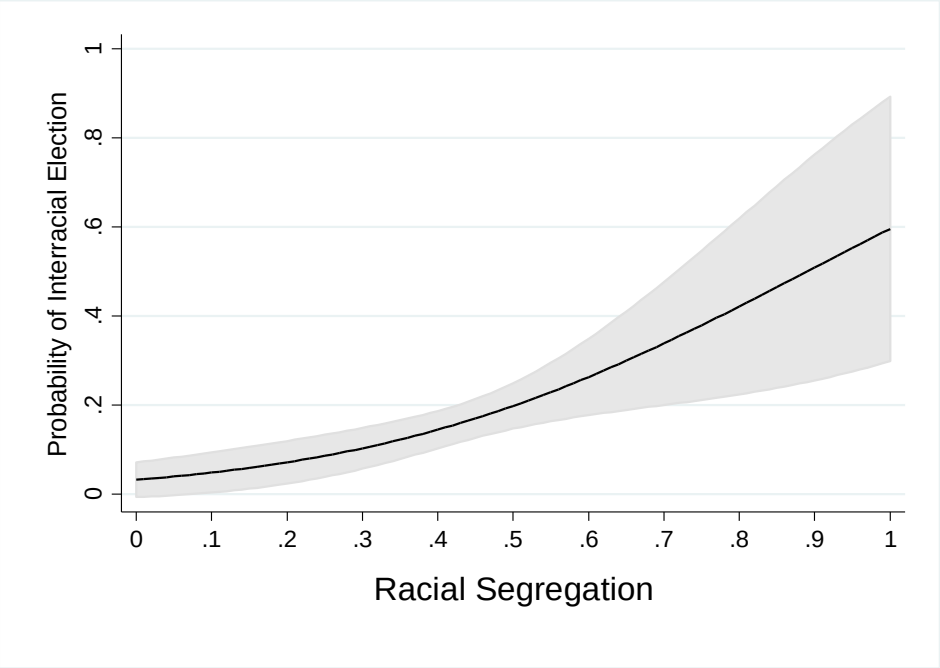


Figure 4.2 makes clear that racially segregated cities were much more likely to experience interracial elections – even controlling for the share of the population that was nonwhite. As will be shown in Chapters 6 and 7, segregated cities are also more likely to have racially divisive politics. Although the dividing lines were in place long before the 1960s, they became much more visible in electoral politics during the postwar period. Elections featuring black candidates (and white contenders) were contentious – driving up turnout among both blacks and whites, and decreasing margins of victory (Vogl 2014, Lublin and Tate 1995, Washington 2006). However, the vast majority of elections were still won by whites. Blacks only won 13% of the 731 contests reflected in Figure 4.2; moreover, these wins were concentrated in places with majority black populations. Although whites maintained power in

most cities throughout the 1960s and 70s, their hold was tenuous. This weakness became increasingly clear through the successes of the open housing movement.

In 1942, only 36% of whites said that they would not be bothered if a black person with their same income and education moved into their block (Schuman and Bobo 1988); the majority of whites, "expect[ed] a vigilant government to protect their segregated neighborhoods" (Sugrue 1996, p63). These beliefs were intimately intertwined with opposition to public housing, which was viewed as "Socialist housing" (Los Angeles Times, March 23, 1952 p E1); specifically, public housing was viewed as, "a taxpayer-subsidized handout for the feckless" (Sugrue 1996, p63). Although a majority of the poor in central cities were white, racial minorities were disproportionately poor and poorly housed.[93] Many whites opposed public housing because they feared, "a change in the racial character of the neighborhood" (New York Times, April 13, 1952, p28). Efforts to locate low-income housing in home-owner neighborhoods and/or integrate white areas was viewed as a government assault on owners', "right to protect one's own property" (Thomas, William P., Letter to the Editor, Washington Post, February 27, 1949).

In order to prevent integration in housing, white homeowners organized neighborhood associations, encouraged vigilant city inspectors to fine overcrowded minority homes, sent hundreds of letters to city governments, turned out in droves at public hearings, and engaged in violent assaults on black residents (Sugrue 1996, Hirsch 1983). But defending white, home-owner neighborhoods was a zero-sum game. For every area that successfully halted integration or low-income housing, another had to absorb (or block) it. This led to a lack of unity among segregationist forces. At the same time, support for scientific racial categorization plummeted

[93] About 62% of persons below the poverty line in central cities were white in 1959. Approximately 14% of whites were poor compared to 41% of blacks (https://www2.census.gov/prod2/popscan/p60-068a.pdf, p7).

(Hayward 2013), and outright, public expressions of racism were, "placed on the defensive" (Hirsch 1983, p175, Schuman et al. 1985).

Advocates of open housing began to win concessions from the government. By 1945, in more than 200 cities, municipal authorities dedicated to maintaining peaceful race relations, established interracial commissions, committees, or agencies that advocated for civil rights reform (Hirsch 1983, p42). These often appeared in the wake of violent riots (Meyer 2000). The racial restrictive covenant, long used by real estate developers and homeowners' organizations to keep minorities out of white neighborhoods, became unenforceable with a Supreme Court decision in 1948 (Abrams 1955). Even before this decision, some municipal judges were refusing to enforce covenants (Hirsch 1983).

Because the government owned and operated public housing, it was an obvious target for constitutional claims of unequal treatment. As early as 1944, New York City enacted an ordinance prohibiting tax-exempt status for housing projects that denied access to tenants on the basis of race. The ordinance had been spearheaded by the city's interracial relations commission. In other places, civil rights organizations pressured municipal housing authorities to integrate public housing; the NAACP brought this matter before the court (Meyer 2000, Sugrue 1996). In 1953, the California Court of Appeals ruled in *Banks* v. *Housing Authority of San Francisco* that San Francisco's Housing Authority must assign residents to public housing without regard to race or color. When the Supreme Court declined to hear the appeal (thereby allowing California's ruling to stand), the case became precedent-setting. By 1954, 21 cities had passed some form of anti-discrimination law (Meyer 2000) and in 1962, President Kennedy signed an executive order,

> directing Federal departments and agencies to take every proper and legal action to prevent discrimination in the sale or lease of housing facilities owned or operated by the

> Federal Government; housing constructed or sold as a result of loans or grants to be made by the Federal Government; and housing to be available through the development or redevelopment of property under Federal slum clearance or urban renewal programs (Papers of Burke Marshall, Assistant Attorney General for Civil Rights).

Not only did cities and states pass anti-discrimination laws covering public housing, some also enacted open housing legislation that sought to prevent discrimination in the private housing market. The leader of the movement was again New York City, passing an ordinance prohibiting, "race, creed or national origin" discrimination in rental housing in 1957 (Bennett 1957b, p9). The ordinance was, "bitterly fought by property owners and real estate representatives" (Bennett 1957a, p7) and explicitly exempted room rentals in single-family homes or duplexes unless they were located in large housing developments (Bennett 1957b). Still, the passage of open housing laws represented clear policy change, largely emerging from the bottom-up. By 1968, 22 states had enacted fair housing laws that covered nearly all sales and rentals (Collins 2006). Such laws were passed in response to vocal, mobilized advocates in black and liberal white communities (Collins 2006). The 1968 Federal Fair Housing Act extended this coverage nationwide.

Despite such policy progress, even as of 1973, the General Social Survey found 64% of white respondents believed that a homeowner should be able to, "decide for himself whom to sell his house to, even if he prefers not to sell to Negroes" (GSS 1973), and a homeowners' rights movement arose in response to the open housing laws. In Detroit, a collection of neighborhood organizations gathered more than 44,000 signatures in support of a homeowners' right initiative (Chicago Tribune, July 13, 1963). The ordinance passed but was declared unconstitutional by the Wayne County Circuit Court in a suit brought by the NAACP (Chicago Defender, December 23, 1964, Sugrue 1996).

In California, after the state legislature passed a fair housing law known as the Rumford Act in 1963, a statewide campaign for its repeal was led by the California Real Estate Association and the California Apartment Owners Association who combined to form the Committee for Home Protection (Self 2003, Duscha 1964, Turner 1964). Proposition 14, confusingly referred to as "The California Fair Housing Initiative," prohibited the state from, "denying, limiting, or abridging the right of any person to decline to sell, lease, or rent residential real property to any person as he chooses."[94] In an analysis of the campaign for Proposition 14, Self (2003) and Brilliant (2010) show that supporters rarely invoked race in their arguments, focusing instead on freedom and property rights. Reporting on the initiative battle, the Washington Post quoted a pamphlet issued by the Committee for Home Protection that stated, "Those who stand for the preservation of individual property rights today are in direct line of descent from the patriots who endured the hardships of the long winter at Valley Forge with George Washington" (Duscha 1964, pA2). Prominent Democrats including Governor Edmund Brown opposed the initiative, and a number of "right-wing Republicans" including Ronald Reagan and Barry Goldwater were "extremely active" in support of the initiative (Duscha 1964, pA2). In the end, the initiative passed with more than 65 percent of the vote, even as Johnson won the presidential race decisively (Greenberg 1964, p1).

Scholars have identified varying patterns of opposition to open housing in different places. For instance, Sugrue (1996) shows that in Detroit, the staunchest integration resisters were working-class white ethnics who owned modest, single-family homes (see pp236-237). In Oakland, Self (2003) finds that it was *not* solely, "an anti-liberal white working class engaged in direct struggle with African American," but rather middle and upper-class whites who,

[94] SALES AND RENTALS OF RESIDENTIAL REAL PROPERTY California Proposition 14 (1964). http://repository.uchastings.edu/ca_ballot_props/672

"understood property rights as sacrosanct expressions of their personal freedom" (p168). Collins (2004) shows that states with higher union membership rates were more likely to pass fair housing legislation and Self (2003) provides evidence that the UAW campaigned against Proposition 14, although Brilliant (2010) argues that rank and file union members were staunchly opposed.

To better understand the individual correlates of opposition to open housing, I gathered data from the 1964 Field Poll in California.[95] Carried out in seven waves between January and October, the poll asked respondents about their support for the Rumford Act and Proposition 14. I recoded these questions to into a variable coded 1 if the respondent *Opposed Open Housing*.[96] I use logistic regression to regress this variable on several demographics including whether or not the respondent *Owns* (vs. rents) her home, her *Race* (coded 1 for white and 0 for nonwhite or other), her *Age*, her level of *Education*, whether or not the respondent or her spouse belongs to a *Union*, and her *Economic Level* (with higher values representing lower classes).[97] In addition, I include a measure indicating whether or not the respondent planned to vote for the *Democratic*

[95] Ideally, I would have analyzed the relationship between community segregation and public opinion on open housing. Unfortunately, the Field Poll recorded no geographic identifiers other than the very broad categories of Northern and Southern California.

[96] For waves 2, 3, and 5, I used the question about the Rumford Act. In waves 1 and 7, no Rumford Act question was asked, so I used a question about Proposition 14 instead. Waves 4 and 6 did not include open housing questions. The text of the questions are as follows: (Rumford Act) Well, as you know the Rumford Act is a Law which makes it illegal for apartment house owners, owners of publicly assisted housing, and real estate brokers to discriminate against anyone because of race, color, religion, national origin or ancestry in the renting or selling of housing accommodations. From what you know of it, do you approve or disapprove of the Rumford Act?" (Proposition 14) "If you were voting today, would you approve or disapprove of this addition to the state constitution? (the amendment reads as follows – prohibits state, subdivision, or agency thereof from denying, limiting, or abridging right of any person to decline to sell, lease, or rent residential real property to any person as he chooses. Prohibition not applicable to property owned by state or its subdivisions, property acquired by eminent domain, or transient lodging accommodations by hotels, motels, and similar public places." Where possible, I use the question about the Rumford Act instead of Proposition 14, because the waves included very different wording of the Proposition question (adding more and less detail about the content).

[97] The coding of this variable is obscure. The codebook suggests that 10 categories were used and lists the following labels "upper," "upper middle," "upper middle," "middle," "middle," "middle," "lower middle," "lower middle," "lower," and "lower." One can only assume that the coders were instructed in some way to make distinctions across categories.

Presidential ticket (Johnson/Humphrey). I cluster the standard errors by poll wave. The results, presented in Table 4.4 paint a clear picture confirming and undermining various aspects of the historical accounts. Summary statistics are presented in Table A4.2.

Table 4.4: Demographic Characteristics of Open Housing Opponents

	β	Std. Err.	P>|t|
Home Owner	0.193	0.065	0.003
White	1.205	0.412	0.003
Education Level	-0.177	0.035	0.000
Union Member	0.284	0.111	0.011
Age	-0.004	0.053	0.934
Economic Level	0.003	0.026	0.897
Democratic Presidential Voter	-0.896	0.386	0.020
Constant	0.33	0.334	0.323
N	4,860		
R^2	0.0575		

Note: Logistic regression with errors clustered by poll wave.

White homeowners were clearly in opposition to open housing, as were less educated respondents, Republicans, and union members. After controlling for these characteristics, economic status and age played no role in the determination of political opinions on open housing. Since the earliest years of the century, the most consistent opponents of integration have been white homeowners who came to view the protection of their neighborhoods as a right to be protected by government. These residents understood the "very essence" of Proposition 14 to be the avoidance of, "state involvement in private decisions in the sale of rental of privately owned residential property" (Blake 1964, pK1).

In 1966, the California Supreme Court declared Proposition 14 in violation of the Constitution, and the Rumford Act was allowed to stand. However, the lack of support for open housing among whites and owners would prove to be a formidable barrier for integrationists. Collins (2004) reveals that fair housing policy had little effect on black housing market outcomes

and did nothing to affect levels of segregation. The changes local communities experienced during post-war period would have other long lasting effects. When California voters overwhelmingly supported Proposition 14, they also overwhelmingly supported Johnson (over Goldwater) for president. Many contemporaries and scholars would explain this apparent inconsistency as Mark Brilliant (2010) does:

> Californians who voted *for* Prop 14 but *against* Goldwater were not so much signaling a wholesale rejection of civil rights…They were, however, hoisting a 'no trespassing' sign. They drew a line that cordoned off a more public sphere where the state could and should protect against discrimination from a more private sphere where no such state laws could tread (p206).

As Kruse (2005) so forcefully demonstrates, and I quantify in Chapter 7, this turn toward understanding neighborhood protection as a right (rather than a racist act), did not, in fact, represent an expression of newly discovered profound principles. It was, rather, a means to a segregationist end, and would serve as the rhetorical foundation for a rising conservative movement. More immediately, the rise of black candidacies, the advancements of the Black Power and Civil Rights movements, and the changes to public policy encompassed in the Voting Rights and Fair Housing Acts all threatened white control over central cities. At the same time, numerous federal and local policies made suburban living an attractive option – one that would offer white homeowners more complete control over the political arena. The next chapters offer evidence of these patterns.

Chapter 5: The Rise of Suburban Segregation, 1970-2011

In 2012, the Manhattan Institute issued a report entitled "The End of the Segregated Century," declaring that, "all-white neighborhoods are effectively extinct," (Glaeser and Vigdor 2012). Though not all demographers shared the optimism of Glaeser and Vigdor, many trumpeted the decline of neighborhood segregation in America following the release of the 2010 Census (Frey 2014). While segregation *between neighborhoods* has declined, another type of segregation has remained remarkably stable, even rising in the post-war period. Segregation *between cities* is persistent along both race and economic lines (Fischer et al 2004, Massey and Hajnal 1995). This means that while integration within cities has increased, cities as a whole have become less racially and economically diverse over time. As a result, a greater share of total segregation in metropolitan areas is now accounted for across cities rather than within them (see Chapter 1). This is what is commonly understood as the process of suburbanization.

While we have substantial evidence on the role federal policies have played in generating suburbanization (Jackson 1985, Massey and Denton 1993, Hayward 2013), our understanding of the ways in which local politics affects suburbanization has been limited. In previous chapters, I argued that segregation was pursued by local governments in order to enhance property values and make it possible to target local public goods towards white homeowners and land-oriented businesses. Such strategies, combined with political control of city councils and mayors' offices, ensured that local governments operated to protect the homogeneity of white homeowner neighborhoods and provide them with disproportionate benefits. In the post-war period, this control was threatened by increasing minority electoral participation and policy achievements. Here, I demonstrate that these changes contributed to suburbanization.

The analyses in this chapter rely on a measure of segregation that incorporates patterns of sorting both within cities and between cities and suburbs. This strategy offers an advancement over previous scholarship because it allows for a consideration of residential sorting at multiple geographic levels at the same time. Most scholars focus either on metropolitan level segregation (e.g. Dreier et al. 2004, Jackson 1985) or neighborhood segregation (e.g. Massey and Denton 1993) – but these types of sorting are intricately linked. By drawing on a nested measure of segregation for all metropolitan areas over a long time span (1980-2011), I am able to show that residents traded one type of homogeneity for another in response to political outcomes. I utilize time lags and metro area fixed effects to handle the problem of endogeneity, as race and class sorting can, in turn, generate different political outcomes (Massey and Hajnal 1995, Friesema 1969, Nelson 1992). In this chapter, I analyze the relationships between cities within metropolitan areas. I concentrate on the ways in which the politics of the central city (the city with the largest population in the metro area) affects demographic residential patterns in the suburbs. I find that when central cities elect minority mayors, when central city expenditures are higher and favor policing, a greater share of metropolitan area segregation is accounted for between cities rather than within them. I also show that in metropolitan areas where land use regulations are stricter in the suburbs than in central cities, more segregation is accounted for across cities. In short, when central city politics do not favor their interests, white and upper class residents are more likely to reside in different cities rather than in different neighborhoods and they lock in these sorting patterns through public policy. In the final section of the chapter, I show that communities with more whites and homeowners receive a disproportionate share of municipal spending.

Understanding the Link Between Segregation and Suburbanization

People choose where they live based, in part, on the types and quality of public goods and services provided in a community, as well as the taxes required to provide those goods and services (Tiebout 1956, Ely and Teske 2015, Banzhaf and Walsh 2008). However, not all residents are equally able to match these preferences with housing location. Low-income households have less choice than do high-income households because amenities (including schools, parks, and public safety) are capitalized into housing prices and rents. Racial and ethnic minority households have also been severely limited in their ability to live where they choose. In part, this is the due to the fact that minorities have lower average levels of income and wealth. But, as previous chapters have shown, it is also the result of concerted efforts by white homeowners to segregate them.

The long history of enforced racial segregation in America has been well documented. Between 1900 and 1940, neighborhood-level residential segregation expanded dramatically throughout the United States (Cutler, Glaeser, and Vigdor 1999). A variety of mechanisms ghettoized racial and ethnic minorities including violence and intimidation perpetrated by white residents, restrictive covenants written into housing deeds, and racial steering by real estate agents (McWilliams 1964, Sugrue 1996, Kruse 2005, Lassiter 2006). As previous chapters have shown, local, state, and federal policies also worked to establish and perpetuate segregation along race and class lines. Through actions like the passage of racial zoning ordinances (Chapter 2), the generation of neighborhood investment ratings through the Home Owners Loan Corporation (Hillier 2005), and official acquiescence to violent activity in protection of homes and neighborhoods (Hirsch 1983), governments pursued policies that limited the mobility of minority households (Ross 2008) between 1900 and 1940.

Around the time of the Second World War, patterns and strategies of segregation began to change. Segregation levels within cities leveled off, but ghettos grew much larger when minority populations increased in cities outside of the South (Cutler, Glaeser, and Vigdor 1999). Similar to previous decades, white homeowners utilized a variety of mechanisms to bar minorities and renters from moving to their communities. Organizing collectively through homeowners' associations, white homeowners controlled government decision making on matters such as the razing of slums, the rebuilding of downtowns, the placement of public housing, and zoning decisions that concentrated negative externalities in poor and minority neighborhoods.

However, as Chapter 4 revealed, starting slowly during the 1940s and then more rapidly during the 1950s and 1960s, white homeowners began to see their exclusive political control chipped away. The massive influx of wartime workers dramatically changed the racial and socioeconomic makeup of many large cities. In the 157 cities that had populations of at least 50,000 in 1940, the white population share declined about eight percentage points between 1940 and 1970 (from 90 to 82). By 2011, the white share of these cities decreased drastically to 52%. However, the share of renters *also* declined during this period, as homeownership rates expanded.[98] At the same time, black and Latino Americans' sustained battle for civil, economic, and political rights gained ground. As racial minorities began to contest and even win political representation, the open housing movement brought the possibility of neighborhood integration, and civil unrest coursed through many large cities. This period became fraught with uncertainty

[98] I only have time series data on homeownership rates for 60 cities. In these places, the share of homeowners rose from 35% in 1940 to 48% in 1970. Nationwide, the homeownership rate expanded from 43.6% to 63% during this period (Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1970). http://www.census.gov/library/publications/1975/compendia/hist_stats_colonial-1970.html

and fear for many whites placed an increasingly high value on segregation as they joined the ranks of homeowners.

Cutler, Glaeser, and Vigdor (1999) provide evidence that since the 1990s, white homebuyers' willingness to pay a premium for homogenous neighborhoods is the central factor perpetuating segregation. Overt racism has decreased dramatically over the last several decades (Schuman et al., 1997), but whites continue to express a preference for same race neighbors (Charles 2003) and minority neighborhoods continue to be perceived as having poor-quality amenities (Bobo, Kluegel, and Smith 1997, Ellen 2000, Emerson, Chai, and Yancey 2001, Krysan 2002, Bayer, Ferreira, and McMillian 2007). Ellen (2000) shows that a growing black population leads whites to leave neighborhoods and/or be unwilling to enter them. Card, Mas, and Rothstein (2008) report a distribution of tipping points (the size of the minority population that affects white population flows) ranging from 5% to 20%. Once a neighborhood reaches the tipping point, it quickly becomes predominantly inhabited by racial and ethnic minorities. White preferences for homogeneity are undoubtedly enhanced by persistent discrimination in the real estate and mortgage industries which limit minority access to some neighborhoods (Pager and Shepherd 2008, Gaslter and Godfrey 2005, Bobo 2001, Farley et al. 1994, Bobo and Zubrinski 1996).

However, while white preferences for white neighbors help to make sense of the fact that whites live in different *neighborhoods* than nonwhites, they do not help to clarify why whites live in different *cities*. Why, even as neighborhoods have grown more integrated, have cities become less so? The answer is politics and political control. Boustan (2010) finds that residents are willing to pay a 7% premium on housing in order to live in a higher-income suburb, in part, to gain access to higher school quality and lower property tax rates. Baum-Snow and Lutz

(2011) and Lassiter (2006) provide evidence that court-ordered integration of city schools led some white parents to seek out homogenous, suburban school districts. Kruse (2005) shows that when Atlanta's whites lost segregation battles and political control, many chose suburban homes. I build on the findings of these scholars to show that suburban sorting along race and class lines is also linked to central city elections of minority mayors, larger city budgets and a greater share of spending on police.

The rapid increase in the population of the suburbs during the post-war period was mostly not the result of white flight. Rather, rising incomes, low-cost federally-backed mortgages, the lucrative federal mortgage deduction, new housing construction in suburban tracts, and an extensive highway system all worked to bring residents to the periphery (Gotham 2000, Nall forthcoming). Yet, in the early decades of the post-war period, suburban living was much more accessible to whites and homeowners than to people of color and renters (Kruse and Sugrue 2006, Jackson 1985). This pattern eventually changed, allowing many racial minorities and renters live in suburban communities today (Frasure-Yokely 2016). However, as Briffault (1990) explains, "the increased heterogeneity of suburbia as a whole is usually not matched by a greater diversification *within* particular suburbs. There are now more poor and working-class people, more minorities and more industrial and commercial sites in suburbia. But poorer, working-class or black suburbanites are likely to live in different jurisdictions separate from those inhabited by affluent or white suburbanites" (p353). These trends have converged to increase divisions along race and class lines across city lines (C.S. Fischer et al. 2004, M.J. Fischer 2008).

In previous decades, processes of consolidation and annexation made city boundaries malleable so that those moving away from the center of the city would have resided within city

limits (Teaford 1979). However, in the post-war period, state annexation laws changed and political boundaries ceased to keep pace with residential spread (Briffault 1990). As a result, the number of incorporated municipalities in metropolitan areas grew and suburbs gained population, economic activity, and political power (Danielson 1976, Miller 1981, Burns 1994).

As independent municipalities, suburbs have the power to regulate land use for all parcels within their borders. Local governments employ land use regulations to manage the character of their community. Consequently, regulatory environments vary significantly from place to place. Cities are capable of enacting minimum lot sizes so that all development must be located on a certain acreage of land, requiring developers to preserve open space in their development, determining the number of multi-family units that will be allowed within city limits, requiring developers to pay a share of infrastructure improvements associated with new development, offering short/long review periods for zoning changes and building permits, and involving few or many local actors in the approval and planning process. Gyourko et al. (2008) find that there is a strong, positive correlation between different regulations. Specifically, if a city regulates in one area, it is significantly more likely to regulate in other areas as well. Einstein et al (2017) provide evidence that the accumulation of regulations reduces the supply of multi-family housing by allowing residents opposed to development to delay the process and file lawsuits. Gyourko et al (2008) also find that community wealth is positively related to regulatory environments. Places with high median home values, more college-educated residents, and higher incomes are most likely to police land use.

Public Opinion on Local Spending

In order for political preferences to be related to population sorting, it must be the case that different groups have different orientations toward government spending and different

policy priorities. At the national level, the gap between white and nonwhite support for government programs like social services, education, and assistance to the poor, as well as beliefs about the optimal size of government is persistent, systematic, and substantively large (Kinder and Winter 2001, Winter 2006, Jackman 1994, Tate 1994, Kinder and Sanders 1996, Dawson 1994, Bowler and Segura 2011). A related, but distinct gap between high and low socioeconomic status individuals also exists (Gilens 2005, Bartels 2008). Whites and the affluent tend to favor limited government while people of color and those of lower socioeconomic status are more supportive of spending and intervention. In an overview of this large literature, Hutchings and Valentino (2004) explain that the black/white opinion gap typically ranges from 35-50 points on matters dealing with race (like affirmative action and government aid to minorities), and more than 20 points on policies that are not explicitly racial, like government spending on welfare, social services, and education (see also Winter 2006, Federico and Luks 2005, Sears, Hensler, and Speer 1979, Kinder and Sears 1981).

There is less research on these questions at the local level, but scholars have found large racial and socioeconomic status divides with regard to candidate choice (Hajnal and Trounstine 2013b, Hajnal 2009), satisfaction with city services (Hajnal and Trounstine 2013a, Van Ryzin et al. 2004, Durand 1976), and trust in government (Rahn and Rudolph 2005, Marschall and Shah 2007). Hajnal and Trounstine (2013b) find that the largest divide in support for mayoral candidates is black versus white residents, with the divide between Latinos and whites close behind. The divide between Asians and whites is smaller, but persistent, as is the divide between high and low socioeconomic status individuals. In an analysis of the determinants of service evaluations among local residents, Hajnal and Trounstine (2013a) find that race stands out as the most powerful predictor. Again, the largest divides are between black and white and Latino and

white respondents, but class divides are also significant. In sum, white and wealthy residents tend to have more conservative spending preferences and support different candidates than do minorities and the poor at both the local and national levels. When political patterns favor nonwhite and poor interests, white and upper-class residents are inclined to select different localities. In the next sections, I provide evidence of these political contributors to segregation.

Measuring Suburbanization, A New Approach

In order to show that political outcomes affect segregation across city lines, I use a segregation measure that can be decomposed into within-city and across-city components. This measure allows me to take advantage of different predictions depending on the level at which segregation occurs and to control for aggregate preferences for homogeneity. In some metropolitan areas, whites and homeowners tend to be segregated from nonwhites and renters in different neighborhoods (indicating segregation at a low level of geography). In others, race and class sorting is more prevalent across city lines (indicating segregation at a higher level of geography). If a city increases its budget, there is no reason to believe that this would induce residents to sort into different *neighborhoods* but, I argue, it could lead to sorting into a different *city*.

While households may choose residential locations that result in more homogenous neighborhoods for a variety of reasons, only cross-city segregation ought to be affected by the *total* bundle of public goods provided by the city and the election of city officials. Because different racial and economic groups have different preferences for local representatives and policies, when budgets or election outcomes are less favorable to white and homeowner preferences, these residents should be more likely to sort into residential locations outside of city

boundaries.[99] We most commonly think of segregation across city lines as a process of suburbanization, but sorting between suburbs is another version of the same pattern. The result should be an increase in the share of metropolitan segregation across cities as opposed to within them.

To determine whether or not city political patterns favoring nonwhite and renter interests affect metropolitan segregation, I constructed a dataset measuring segregation in primary metropolitan statistical areas from 1980-2011 GeoLytics' Neighborhood Change Database (NCDB) and the 2007-2011 American Community Survey. These data allowed me to create a panel dataset measuring segregation at the census-tract level for each metropolitan area. To measure segregation, I use the *H* Index described in Chapter 1. The *H* Index allows for decomposition of within-city and across-city components.[100] It measures the evenness of dispersal of groups across geographic units (in this case, Census tracts, cities, and metropolitan areas).

The groups I use to calculate the *H* Index here are white/nonwhite, renter/homeowner, and wealthy/non-wealthy. Since 1980, the Census has tabulated the number of residents in each Census tract that self-identify as racially white and ethnically not-Latino; these individuals are classified as whites in my analysis. All other racial/ethnic combinations are classified as

[99] There is no evidence that the inverse is true. When budgets favor white/wealthy preferences, poor and minority residents have not been found to move to communities that prioritize their demands and needs. For instance, Levine and Zimmerman (1999) investigate the potential for states' welfare programs to act as magnets for the poor. They find little support for this hypothesis. The process of gentrification – where affluent residents return to the central city – is another scenario that could lead to movement among poor residents. Here too, scholars have found no evidence that gentrification leads poor households to leave their housing units (Vigdor, Massey, Rivlin 2002). The most likely explanation, of course, is that it is whites and the wealthy who have had the greater ability to choose where they live. Beyond this, political outcomes are typically much more responsive to the preferences of whites and the wealthy (Hajnal 2009; Gilens 2014).

[100] The approach is similar to the one taken by C.S. Fischer et al. (2004) who analyze trends over time in the level at which segregation occurs. In contrast to C.S. Fischer et al. (2004), I seek to determine whether such patterns are related to city policy choices, not just time.

nonwhites. The Census gathers tenure information on all occupied housing units, noting whether they are rented or owned. The share of units rented versus owned comprises my measure of segregation. Finally, the Census reports income categorically, not continuously, so wealthy refers to the share of families in each census tract with incomes above particular thresholds for each census year. [101] These thresholds were determined by calculating the average family income for all Census tracts in the United States for each Census year. The wealthy threshold represents the income bin with its starting point closest to the 90th percentile of the distribution. The thresholds for each census year are: $35,000 for 1980, $75,000 for 1990, $100,000 for 2000, and $150,000 for 2011. All families with this amount of income or more are included as wealthy.[102]

As explained in Chapter 1, the *H* Index measures the degree to which the diversity of subunits differs from the diversity of the larger unit, expressed as a fraction of the larger unit's total diversity and weighted by the subunit's share of the total population. For each census year, I calculate an *H* Index for all cities within a metropolitan area, denoted H_{m_c} and all tracts within each city, denoted H_{c_t}.[103] These *H* Indices reveal how diverse each census tract is given the diversity of the city and how diverse each city is given the diversity of the metropolitan area.

$$H_{m_c} = \sum_{c=1}^{C} \frac{P_c}{P_m}\left(\frac{E_m - E_c}{E_m}\right)$$

[101] I use family as opposed to household income because the NCDB does not report household income at the tract level.

[102] Census tracts range from 0 to 100% wealthy, with a mean of 18%, a median of 13%, and a standard deviation of 16%.

[103] Census tracts are perfectly nested within states and counties. However, in some cases tracts cross city lines. In these cases, GeoLytics assigned the tract to the city containing the largest share of the tract population. In 2011, tracts are weighted by the share of population contained in each city. Observations are unique when defined by year, tract, city, county, and metropolitan area. Tracts located in unincorporated areas within a metropolitan area are combined as a single unincorporated unit. Tracts outside of metropolitan areas are not included in the analysis. I use Metropolitan Statistical Areas and where possible, Primary Metropolitan Statistical Areas as the highest level of aggregation (not Consolidated Metropolitan Statistical Areas which are much larger).

$$H_{c_t} = \sum_{t=1}^{T} \frac{P_t}{P_c}\left(\frac{E_c - E_t}{E_c}\right)$$

P represents total population of the geography *t*, *c*, or *m*.

These two indices can be combined produce a total *H* Index for the metropolitan area which is equal to the *H* Index calculated for the metropolitan area at the tract level, H_{m_t}.

$$H_{m_t} = \sum_{t=1}^{T} \frac{P_t}{P_m}\left(\frac{E_m - E_t}{E_m}\right) = H_{m_c} + \sum_{c=1}^{C} \left(\frac{P_c}{P_m}\right)\left(\frac{E_c}{E_m}\right) H_{c_t}$$

I analyze the percentage of total metropolitan area segregation that can be attributed to cross-city segregation as opposed to within-city segregation. I have one observation per metropolitan area in 1980, 1990, 2000, and 2011. The dependent variable in my analyses is the share of total segregation in a metropolitan area that is determined by segregation across cities versus within them:

$$share_across = \frac{H_{m_c}}{H_{m_t}}$$

My argument is that city politics affects segregation patterns. Because I only have one measure of segregation for each metropolitan area, I analyze the effect on segregation of city politics in the city with the largest population in the metropolitan area. For example, in the Detroit-Warren-Livonia metropolitan area, I estimate the relationship between Detroit's city expenditures and the share of metropolitan segregation that is attributed to whites living in different cities than nonwhites (which happens to rise from 51% to 88% between 1970 and 2011). Table 5.1 provides aggregate descriptive statistics for the central cities versus non-central cities in my analysis as of 2011.

Table 5.1: Central vs. Non-Central Cities, 2011

	Central Cities	Suburbs
% White	58%	73%
% Black	19%	9%
% Latino	16%	12%
% Asian	4%	4%
% in Poverty	21%	12%
% Renters	47%	32%
Median HH Income	$42,796	$61,670
% Wealthy	9%	13%
N	323	4,145

The table reveals that suburbs are whiter, wealthier, and filled with more homeowners than central cities.

In Chapter 4, I argued that in the postwar period, white homeowner neighborhoods felt threatened by increasing electoral contestation by minority candidates and the successes of the open housing movement. Public opinion surveys reveal that racial and income groups are divided over the proper size of government. Further, studies have shown that white opinion on government spending is powerfully shaped by attitudes toward the group perceived to be the beneficiaries of the spending (Nelson and Kinder 1996). During the 1960s and 1970s many central cities became associated with rising crime rates (Wilson 1987). Today, whites link crime and criminality with blackness (Peffley Shields, and Williams 1994; Gilliam and Iyengar 2000, Gilliam et al 1996). For wealthy, white, homeowners with the ability to choose suburban living, it is plausible that the election of minority mayors, increases in the municipal budget, and shares of the budget going toward policing in central cities all may have played a role in encouraging segregation across city lines.

To analyze these relationships, I regress the share of metropolitan area segregation determined across cities on independent variables capturing political and policy control in the

central city. The first is a variable noting whether or not the central city had a *Minority Mayor* (African American, Hispanic, or Asian) at any point in the decade prior to the year in which segregation is measured. These data are from a number of different sources, including Vogl (2014), Hopkins and McCabe (2012), and my own research using websites and newspaper accounts of elections. The variable is a dummy variable coded 1 if the central city had a minority mayor and coded 0 if the mayor was white in all years of the prior decade. Next I add two spending measures: inflation-adjusted *Direct General Expenditure Per Capita* and the proportion of the city budget spent on *Policing.*[104] These variables come from the Census of Governments State and Local Government Finance files from 1977 to 2012.[105] The data are collected in years that end with 2 and 7 and I used linear interpolation to generate estimates of city expenditures in 1980, 1990, 2000, and 2011 to match the Census population data. I add the natural log of the *Population* as a control because large cities have different spending patterns than small cities and size may affect segregation patterns by offering residents greater ability to sort themselves into like neighborhoods. Finally, I add a measure of the *Violent Crime Rate* in the central city to capture local conditions to which both policy and movers might have reacted.[106] These data represent 209 metropolitan areas and include a total of 618 observations. Summary statistics are included in appendix Table A5.1.

There is an obvious endogeneity problem with the assertion that city elections and budgets can affect residential locations. That is, we know that as home-owning whites choose to

[104] Police protection expenditures include, "expenditures for general police, sheriff, state police, and other governmental departments that preserve law and order, protect persons and property from illegal acts, and work to prevent, control, investigate, and reduce crime" Pages 5-58 in The U.S. Bureau of the Census Government Finance and Employment Classification Manual available at: http://www2.census.gov/govs/pubs/classification/2006_classification_manual.pdf

[105] [105]Available at http://www2.census.gov/pub/outgoing/govs/special60/. Filename is "_IndFin_1967-2012.zip"

[106] These data are from the Department of Justice Uniform Crime Reporting Program: Offenses Known and Clearances by Arrest reports for 1980, 1990, 2000, and 2011.

locate in the suburbs as opposed to central cities, the remaining central city population will have different policy and candidate preferences. The success of black mayoral candidates in this scenario is what Friesema (1969) called the "Hollow Prize." To attempt to mitigate problems this pattern might cause for the analysis, the mayoral data are measured in the decade prior to the segregation data and all of the remaining measures are lagged 10 years. Additionally, my analyses include fixed effects for metropolitan area, so that the estimated effects of politics are within, rather than across areas.

Is it the case that politics favoring nonwhite and poor preferences in central cities is associated with additional cross-city segregation? In short, yes. Table 5.2 presents the results.

Table 5.2: Effect of City Spending Patterns on Share of Metropolitan Segregation Attributed to Cross-City Segregation

	Racial Segregation			Renter Segregation			Wealth Segregation		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Politics favoring minorities & renters									
Minority Mayor	0.032	0.01	0.01	0.019	0.01	0.08	0.027	0.01	0.01
Direct General Expenditure Per Cap	0.052	0.01	0.00	-0.004	0.01	0.58	0.013	0.01	0.07
% Policing	0.723	0.14	0.00	-0.223	0.12	0.06	0.458	0.12	0.00
Controls									
Population (logged)	0.046	0.03	0.12	-0.057	0.03	0.03	-0.013	0.03	0.60
Crime Rate	0.566	0.13	0.00	0.134	0.11	0.24	0.159	0.11	0.15
Constant	-0.380	0.35	0.28	1.051	0.31	0.00	0.341	0.30	0.25
Number of observations	618			618			618		
Number of MSAs	209			209			209		
R^2 (within)	0.211			0.035			0.078		

Note: OLS Regressions, fixed effects for metro area included in all models
Minority mayor refers to previous decade, all other measures lagged 10 years

Table 5.2 tells a consistent story. When central cities elect minority mayors, when the spend more money, and when a larger proportion of their budget is spent on policing a larger proportion of the metropolitan area's total segregation along race and class lines is accounted for across cities rather than within them. In short, more liberal policy in the central city leads to more segregation across city lines while more conservative spending patterns in center cities lead to less. As Table 5.1 makes clear, non-central cities are whiter, wealthier, and more heavily populated with homeowners than central cities. This suggests that it is wealthy whites who make the choice to reside outside of the central city when policies favoring poor and minority interests are enacted. Conversely, wealthy white residents choose to remain in the central city when budgets are more austere. Overall, the results are strongest and most consistent for racial segregation. As has been true throughout this book, race is the clearer dividing line.

With regard to racial segregation in particular, the results are powerful. If we compare, on the one hand, a city with a white mayor in the 25th percentile of the distribution on per capita spending and police expenditure, to one with a minority mayor and in the 75th percentile on the

spending measures, the metro-area racial segregation accounted for across cities increases from 35% to 46%. This is equivalent to the difference between the patterns of segregation in the Wichita, Kansas area (*share_across_race* = 0.355), and the Waco, Texas area (*share_across_race* = 0.468) or the Charlotte, North Carolina area (*share_across_race* = 0.358) and the Portland, Oregon area (*share_across_race* = 0.465).[107]

Land Use Regulation and Suburban Segregation

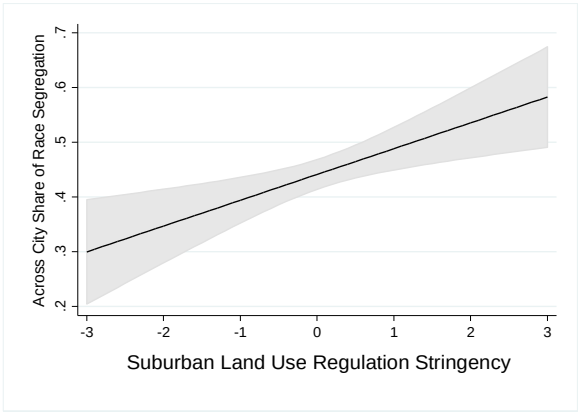
A number of scholars have emphasized the increasing role of land use regulation in the maintenance of segregation (Rothwell 2011, Pendall 2000, Orfield 2002). Scholars have often argued (although not demonstrated), that this tendency has generated a shift from the predominance of racial segregation toward class segregation (Mieszkowski and Mills 1993, Fischel 2004). The work that empirically investigates the relationship between land use regulation and segregation (e.g. Rothwell and Massey 2009, Glaeser and Ward 2006, Berry 2001) has not made a distinction between segregation within cities and segregation across them. This is an important omission, because homogenous suburban municipalities ought to be able to utilize land use regulation much more effectively than homogenous neighborhoods within cities, as municipalities wield more political power. If my argument is correct, that whites and homeowners seek to use local policy to protect home values and control the distribution of public goods, then metropolitan areas with more intense land use regulation in the suburbs should also have greater race and class segregation across cities. This is exactly what I find.

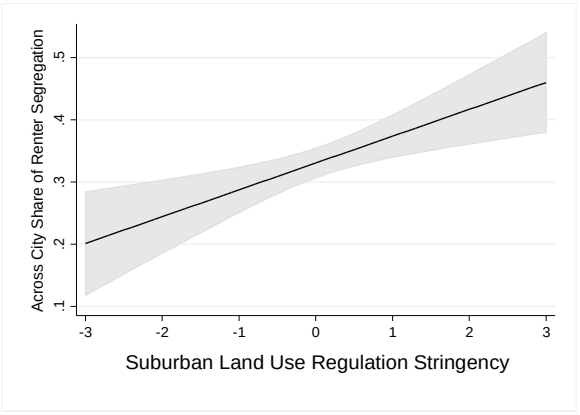
To provide evidence of this link, I use the Wharton Residential Land Use Regulatory Index (WRLURI) developed by Gyourko, Saiz, and Summers (2008). This index is built from a 2006 survey of local governments regarding the characteristics of the regulatory process, rules of

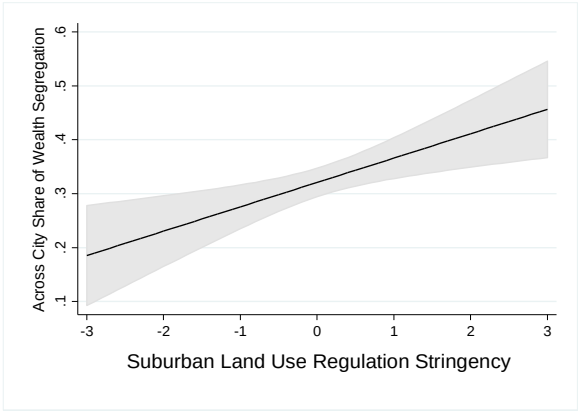
[107] These statistics are for the year 2011.

local residential land use regulation, and regulatory outcomes. These data were combined to measure the, "stringency of the local regulatory environment in each community" (Gyourko et al. 2008, p3). The survey contains data for more than 2,700 municipalities. For each metropolitan area, I determined the average WRLURI for all suburban communities. I then calculated the difference between the center city WRLURI and suburban WRLURI. This difference measure provides an estimate of the degree to which suburban municipalities have more stringent land use regulations than the central city for each metro area. I combined these data with the segregation measures described in the previous analyses – the share of the metropolitan area segregation accounted for across cities rather than within them. The WRLURI data are only available at one point in time, so I analyze the correlation between each region's *Share Across* and the *WRLURI Difference* in 2011 using OLS regression. Figure 5.3 displays the marginal effect of suburban land use regulation stringency on race, renter, and wealth segregation across cities.

Figure 5.1: Correlation Between Suburban Land Use Regulation Stringency & Segregation Across Cities







Suburban land use controls are significantly related to the degree to which segregation is accounted for across rather than within cities in metropolitan areas. The graphs also make clear that there is no difference between the effects of land use regulation on race versus class segregation. They are equally effected.

I've argued that white homeowners institutionalized segregation in order to protect their public goods and property values. The result of these policies in the post-war period has been to increase the disparity in service provision across cities. To show this, I draw on the same spending and segregation data described in the previous section. First, I aggregate all inflation-adjusted expenditures per capita by metropolitan area, for each year. This total expenditures per capita variable represents the collective dollars spent by municipal governments in a metropolitan area. I divide each municipality's expenditure by this total to generate the share of metropolitan spending accounted for by each city. I calculate a similar measure for population, generating the share of metropolitan population accounted for by each city. The ratio of these two quantities, the *Spending Equity Ratio*, is my first dependent variable.

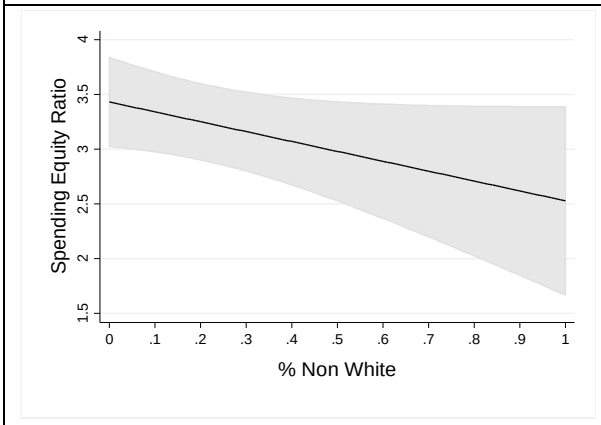
$$Spending\ Equity\ Ratio_j = \frac{E_j/E}{P_j}$$

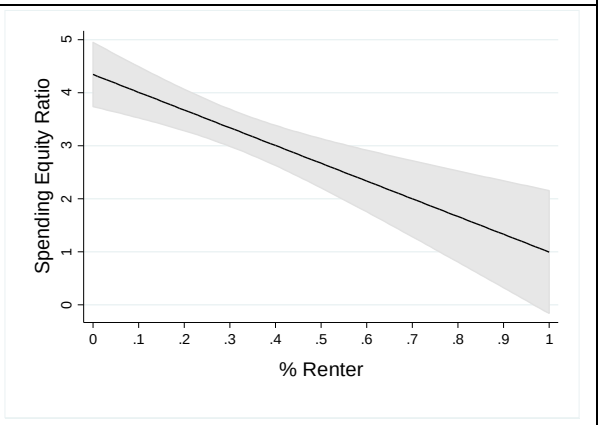
Where E_j is the per capita expenditure by city j, E is the total expenditures in the metropolitan area, and P_j is the share of the metropolitan population represented by city j.

This ratio measures the disparity between the percentage of the population represented by a city and the percentage of total resources received by that population. If resources are distributed exactly equally across the population, the ratio takes a value of 1; values less than 1 indicate that the community receives fewer resources than its population size would predict, and values greater than 1 indicate an abundance of resources. Between 1972 and 2012, this measure averaged 0.4 for central cities and 2.5 for suburbs.[108] Suburban residents receive two and a half times the resources that their population share justifies, while central city residents receive less than half of the amount of resources that their population share justifies. This is the case despite the fact that central cities spend more, on average, per resident than do suburbs. Unsurprisingly, communities with larger populations of racial and ethnic minorities and more renters have a lower *Spending Equity Ratio*. Regressing the *Spending Equity Ratio* on the share of the city that is *Nonwhite* and the share that *Rents* their homes, including fixed effects for years and errors clustered by metropolitan area, yields Figure 5.2.

[108] Calculated for all cities with more than 1,000 residents and all metropolitan areas in which I have data on more than one city.

Figure 5.2: Effect of Race and Class on Spending Equity





Given that cities with more homeowners and more white residents are more likely to garner a larger share of total resources spent in metropolitan areas, we should also expect that metropolitan areas with more segregation along race and class lines will witness more variation in spending from city to city. This is exactly what I find. My dependent variable in this analysis is a measure developed by Rhode and Strumpf (2003) called the coefficient of variation (CV). The CV captures the degree of heterogeneity in spending for a metropolitan area. It is calculated as the ratio of the standard deviation of spending to the mean of spending.

$$CV_{msa} = \frac{\sqrt{\sum_j P_j \left(E_j - M\right)^2}}{M}$$

Where E_j is the per capita expenditure of city j, M is the mean per capita expenditure for all cities in the metropolitan area, and P_j is the share of the total metro area population in city j. Rhode and Strumpf (2003) use this measure (calculated for the entire nation, not by metropolitan area) to show that over time, governments across the United States have grown more alike in their spending. I find the same – the mean CV declined about 17.5% between 1972 and 2012, from

1.32 to 1.09. However, more segregated metropolitan areas changed more slowly than less segregated areas. To see this, I regress the CV on racial, renter, and wealth segregation across cities (H_{m_c}). I add fixed effects for year to account for the declining time trend. Table 5.3 presents the results.

Table 5.3: Correlation Between Spending Heterogeneity and Segregation

	Column 1		
	β	Std. Err	P>|t|
Racial Segregation Across Cities	1.02	0.321	0.001
Renter Segregation Across Cities	1.83	0.661	0.006
Wealth Segregation Across Cities	-0.086	0.917	0.925
Constant	1.295	0.066	0.000
N	3149		
R^2	0.031		

Note: Fixed effects for year included but not presented.

The data reveal that metropolitan areas with more racial and renter segregation across cities – that is, where whites/ nonwhites, renters, and owners tend to live in different municipalities, we see more heterogeneity in municipal budgets. Combined with the results presented in Figure 5.2, we can see that communities with large populations of renters and racial minorities in segregated metropolitan areas have access to a much smaller share of the total dollars spent by local governments. Segregation is correlated with inequality; exactly as its architects intended.

Conclusion

Even after decades of progressive change in racial attitudes and growing concern over income inequality, America remains a segregated nation. Increasingly, segregation along race and class lines has occurred among cities rather than within them. I have argued that city politics has played a role in this change. Overall, whites and the wealthy individuals seek smaller, less

active local governments. When city policy does not favor their interests, these types of residents are more likely to trade homogenous neighborhoods within cities for homogenous cities instead. When central cities in metropolitan areas have more active policy agendas, when they spend more on community development, and when property taxes are higher, we see greater segregation across city lines. Whether this is because white homeowners leave central cities or never move in, the result is a higher degree of separation between cities in metropolitan areas. These patterns become fixed by suburban land use regulations that shape the character and structure of these communities.

Chapter 6: Segregation and Public Goods Provision, 1982-2012

Chapter 5 revealed that suburbanization has produced inequalities in spending patterns from city-to-city and I have argued that this was precisely the goal segregations' proponents. But segregation has another set of consequences that we might say were unintended; consequences for the polarization of politics at both the local and national levels. This chapter and the next make a case for this claim.

Many United States cities function without regular problems. They have well-kept roads, sewers that never overflow, and public parks with swing sets and restrooms. Others, however, struggle to maintain balanced budgets, fail to adequately equip or staff their police forces, and offer little assistance to residents of limited means. What explains these differences? One obvious answer is simply wealth. The history of suburbanization detailed in previous chapters suggests that whites and homeowners have ensconced themselves in homogenous municipalities. Given the strong correlation between race, property ownership, and wealth, income differences across communities could explain much of this variation. Except they don't. Although the relationship is statistically significant, the correlation between city level median income and per capita direct general expenditure is only about 0.037 in my data.

At a very basic level, the generation of public goods requires cooperation. Why is it then that some cities find it more difficult to cooperate than others? Scholars have identified racial/ethnic diversity and changes in diversity as prime suspects in determining under-provision of public goods (e.g. Alesina et al. 1999, Hopkin 2009). Nonetheless, diversity alone does not generate a lack of cooperation in city politics. It is only when cities are also segregated along racial lines that we see lower public goods provision. Segregated places are politically-polarized places. The gulf between whites and minorities in segregated places makes it less likely that

they will find common ground in support of a bundle of taxation and expenditures, driving down collective investment. It is segregation, not diversity that contributes to inequality.

I provide evidence for this argument using election data from 25 large cities between 1990 and 2010 and demographic data matched to city finance data from 1982 to 2012 in more than 3,000 cities. To handle the problem of endogeneity in the finance analysis, I instrument for segregation using the number of waterways in a city. I find that segregated municipalities spend less on a wide range of public goods. This lower spending has consequences. In the final section of the chapter, I find that racially segregated cities also have more sewer overflows per capita.

I focus here (and in the next chapter) on racial segregation alone. A series of tests revealed that renter and wealth division do not produce similar results. These findings are bolstered by the historical evidence which indicates that it is race and not class division that generates the starkest conflicts in city politics. Throughout, I control for indicators of wealth and homeownership to ensure that the results are not conflating race and class.

Literature and Hypotheses

Local politics, more so than national or state politics, concerns battles over space. This is because local governments control the location of negative and positive externalities (like pollution-producing factories or public parks) and also because many of the functions that local governments provide are allocational in nature (e.g. where police officers will be deployed and which roads will be repaved). One of the few powers that is reserved nearly exclusively by local government is that of zoning or planning. As a result, geographic areas within cities (e.g. neighborhoods) are frequently important actors in municipal politics.

At the same time, neighborhoods in America remain highly segregated along racial lines (see Chapter 1). Although neighborhood racial segregation has lessened in recent decades, today, the typical white American lives in a neighborhood that is overwhelmingly white, while Black, Latino, and Asian Americans live in substantially more integrated places (Logan and Stults 2011).[109] These patterns have created stark divides between white and nonwhite communities (Enos 2011). When a city is residentially segregated by race, issues cleave along racial and not just spatial lines (Massey and Denton 1993).

Furthermore, in segregated cities, divisions across racial groups are likely to be exacerbated because the political priorities and opinions of racial groups are likely to be more divergent than they are in integrated places. Neighborhood racial isolation is associated with a high degree of racial intolerance, resentment, and competition among all racial groups (Oliver 2010, Chapter 7). This correlation is due to both self-selection and interpersonal interactions (Rodden 2010). When deciding where to live, people with racially intolerant attitudes often seek same race neighbors (Charles 2003, Boustan 2012) either because they want to minimize contact with other race individuals (Massey and Denton 1993) or because they associate other race neighborhoods with poor neighborhood quality on dimensions such as schools, crime, and property values (Helper 1969, Ellen 2000, Bayer, Ferreira, and McMillian 2007, Krysan et al. 2008). However, living in different types of neighborhoods may also change individuals' perspectives. In integrated neighborhoods, regular, casual interaction may work to counteract dominant, negative stereotypes (Allport 1954, Oliver and Wong 2003). The result of both population sorting and/or neighbors' influence is that individuals who live in homogeneous

[109] African Americans, Latinos, and Asians live in neighborhoods that are comprised of 22%-46% of their own group.

neighborhoods are more likely to harbor negative stereotypes about other groups (Oliver 2010, Oliver and Wong 2003).

Yet, at higher levels of geography (e.g. in cities, counties, and metropolitan areas) it is integration or diversity that correlates with intolerance, prejudicial attitudes, increased racial tension, less cooperative behavior, and lower spending on public goods (Key 1949, Glaser 1994, Branton and Jones 2005, Taylor 1998, Campbell et al. 2006, Alesina et al. 1999, Vigdor 2004, Hopkins 2009, Poterba 1997). As a result, racial competition, racial resentment, and racial conservatism are positively correlated with homogeneity at the neighborhood level, but negatively correlated with homogeneity at the city level (see Oliver 2010 for a detailed account of these conflicting patterns).[110] A severely segregated city is one that is diverse overall and has many homogeneous neighborhoods – both characteristics which point towards a high degree of racial conflict.

This higher degree of racial conflict in segregated cities has obvious political implications. Levine (2014) has found that racial segregation is strongly predictive of partisan political divisions in metropolitan areas and that these political divides result in an unwillingness to cooperate on metropolitan-wide policy solutions. We can expect a similar pattern at the city level. First, in segregated cities, racial groups should be more divided with respect to political priorities. Second, diverse but divided cities may be less able to come to a consensus about the production of basic government services, and thus, will be less supportive of public goods provision. This second hypothesis speaks directly to the claim that diversity drives down

[110] There are a few exceptions to this pattern. A handful of scholars have *not* found that diversity increases tolerance at the neighborhood level. Gay (2006) and Oliver and Mendelberg (2000) find no relationship between neighborhood racial context and racial attitudes. Enos (2016) shows that that homogeneity decreases voter turnout among whites and also decreases support for conservative candidates. Cho, Gimpel and Dyck 2006 find that homogeneity decreases turnout among Asian Americans in some cases, but increases it (or has no effect) in others. Leighly and Vedlitz (1999) find that homogeneity correlates positively with turnout for whites.

collective investment (Alesina et al. 1999). As Benoy Jacob (2013) has persuasively argued, not all diversity is equivalent. When whites and nonwhites live in the same city, the pattern of residential integration ought to factor into expectations about public goods expenditures. White and nonwhites may live as next door neighbors, but they also may not. If segregation represents preferences or attitudes that are incompatible with collective investment, then uneven distribution of groups, not diversity per se, ought to correlate with lower public goods spending.

Segregation and Political Polarization

In municipal politics, vote patterns and policy priorities are shaped by racial cleavages more so than *any* other demographic division (Hajnal and Trounstine 2013a, Hajnal and Trounstine 2013b, Hajnal and Trounstine 2014). While ideology, partisanship, and class all play important roles in determining vote choice and support for municipal administrations, conflicts among racial groups are predominant. If segregated cities are more politically polarized, these racial divides should be most pronounced in places with a high degree of residential segregation. To determine whether or not this is the case, I analyze the relationship between residential segregation patterns and racial divisions in mayoral elections in the nation's largest cities between 1990 and 2010.

To estimate the effect of segregation on racial polarization, I use a dataset compiled by Hajnal and Trounstine (2014) that measures support for winning mayoral candidates across different racial groups in primary and general elections in large cities. The data include 91 separate contests from 25 cities. Vote by race data were compiled from a combination of exit polls, pre-election surveys, homogenous precinct analyses, and ecological inference.[111]

[111] These data are described completely in Hajnal and Trounstine (2014).

Summary statistics and a list of cities included in the analysis are provided in appendix Tables A6.1 and A6.2.

For each election, I calculated the difference in support for the winning candidate between black and white voters, Latino and white voters, and black and Latino voters. The dependent variable in this analysis is the absolute value of the largest difference in support for the winning candidate between any two racial groups. For instance, in Philadelphia in 2003, exit polls reported that 24% of white voters supported the winner, John Street, compared to 88% of black voters, and 47% of Latino voters. In this election the black-white divide was 0.64, the Latino-white divide was 0.23, and the black-Latino divide was 0.41. Therefore, the dependent variable takes the value of the black-white divide, 0.64. In 62 of the 91 contests, the largest divide was between black and white voters, in 13 contests it was the divide between Latino and white voters, and in 16 contests the largest divide was between black and Latino voters.[112] The distribution of racial divides across cases is listed in appendix Table A6.2.

As described in Chapter 1, my primary independent variable is a measure of segregation called Theil's *H* Index. The *H* Index measures the degree to which the diversity in each neighborhood differs from the diversity of the city as a whole, expressed as a fraction of the city's total diversity and weighted by the neighborhood's share of the total population.

$$H = \sum_{n=1}^{N} \frac{P_n}{P_c}\left(\frac{E_c - E_n}{E_c}\right)$$

Where *P* represents the total population of neighborhood *n* or city *c* and E is the entropy of *n* or *c*. *H* varies between 0, where all neighborhoods have the same composition as the entire city, and 1 where all neighborhoods contain only one group.

[112] As an alternate measure of division, I took the difference in support between white voters and the average of support among black and Latino voters. The results are extremely similar.

I calculated the *H* Index for all United States cities using Census-tract level demographic data from the 1980, 1990, and 2000 Censuses of Population and Housing and from the 2011 American Community Survey.[113] To start, I use four groups in the calculation of entropy: white (non-Hispanic), black (non-Hispanic), other (non-Hispanic), and Hispanic/Latino.[114] I then combine Blacks, Hispanics, and Other races into a single nonwhite group for comparison. For reference, the mean *H* Indices for each city in the analysis are shown in appendix Table A6.2.

I include a number of control variables in addition to the *H* Index. One of the primary arguments in the literature is that racially and ethnically diverse populations will have heterogeneous political preferences which then drives low spending on public goods. If this is the case, we should see more racial polarization in the vote as diversity rises. Thus, I include the proportion of *Blacks*, *Latinos*, and *Asian Americans* in the city and a measure of *Diversity* known as the Herfindahl Index[115]:

$$Diversity = 1 - \sum_{r=1}^{R} \pi_r^2$$

I also include control variables that are shown by Hajnal and Trounstine (2014) to affect racial polarization in voting and which may also be correlated with segregation. I account for the *Median Household Income*, proportion of the population *Renting* their homes, proportion of the population with a *College Degree*, the race of the candidates in the election (a dummy variable coded 1 if the election featured *Biracial* candidates), a measure noting whether or not the

[113] Tract-level data for 1980, 1990, and 2000 come from a proprietary product developed by GeoLytics called the Neighborhood Change Database (NCDB), which matches and normalizes Census tracts over time. The data from the 2011 American Community Survey (ACS) are available for download through the Census ftp server located at http://www2.census.gov/.

[114] The 1980 tract-level data only disaggregate the non-Hispanic population into Whites, Blacks, and Others, so I am unable to include Asians as a separate group.

[115] This calculation includes five racial groups: white (non-Hispanic), black (non-Hispanic), Asian (non-Hispanic), Hispanic, and other.

election was *Non-partisan*, an indicator for *Primary* elections, and the size of the total *Population* (logged). Finally, I include fixed effects for year and region and random effects for cities.

In Model 3, I also add a measure of the average *Ideology* among the city's white residents to determine whether or not segregation is merely a proxy for a conservative white population. This measure was constructed using General Social Survey (GSS) data from 1998, 2000, 2002, 2004, 2006, and 2008. Using restricted access data, I geo-coded each respondent in the GSS to his/her city of residence. I then took the mean ideology score for each city's white respondents for each year (higher values indicate more conservative respondents).[116] I interpolated ideology for odd years and then merged these data to the racial polarization data set. In order to preserve as many observations as possible, I matched GSS data from the most recent year for each election.

The results presented in Table 6.1 offer strong support for the hypothesis that more segregated cities are also more politically polarized.

[116] I dropped city/years from the GSS that only contained a single respondent.

Table 6.1: Racial Polarization in Segregated Cities

	Racial Divide w/ Multi-Group Segregation Index			Racial Divide w/ Two-Group Segregation Index			Racial Divide w/ Ideology control		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Multi-group H Index	0.932	0.39	0.02						
White/nonwhite H Index				0.756	0.30	0.01	0.835	0.30	0.01
Diversity	0.385	0.36	0.29	0.518	0.32	0.11	0.584	0.32	0.07
% Asian	-0.115	0.53	0.83	0.120	0.56	0.83	-0.004	0.52	0.99
% Black	-0.432	0.27	0.11	-0.237	0.22	0.27	-0.133	0.21	0.53
% Latino	-0.191	0.26	0.46	-0.059	0.25	0.82	0.095	0.28	0.73
Median HH Income (1000s)	-0.004	0.00	0.52	-0.007	0.00	0.32	-0.002	0.00	0.81
% Renters	-0.580	0.42	0.17	-0.806	0.43	0.06	-0.419	0.45	0.36
% College Educated	0.328	0.71	0.65	0.723	0.73	0.32	0.123	0.87	0.89
Biracial contest	0.210	0.04	0.00	0.208	0.04	0.00	0.192	0.04	0.00
Nonpartisan Election	-0.090	0.07	0.18	-0.089	0.07	0.18	-0.034	0.06	0.60
Primary Election	-0.092	0.03	0.00	-0.09	0.03	0.01	-0.071	0.03	0.02
Population (logged)	0.035	0.06	0.53	0.048	0.05	0.38	-0.011	0.06	0.86
White Ideology							-0.051	0.03	0.11
Constant	-0.242	0.57	0.67	-0.393	0.56	0.49	0.236	0.61	0.70
Wald χ^2	187.12		0.00	189.68		0.00	222.92		0.00
N	91			91			86		

Note: Multi-level mixed-effects linear regressions with fixed effects for region and year, and random effects for cities.

The relationship between segregation and political polarization is powerful. A city in the 10th percentile of the segregation distribution can be expected to have a 35 percentage point divide between different racial groups' support for the winning candidate, while a city in the 90th percentile of segregation has a predicted racial divide of 63 percentage points.[117] These results hold even with the inclusion of racial demographics. Segregation, not just diversity, matters for polarization. The data also indicate (comparing columns 1 and 2) that there is no significant difference in accounting for segregation among multiple racial groups as opposed to accounting

[117] Estimates were generated from the regression presented in column 1 with all other variables held at their mean values. Predicted effects were generated using the "margin" command in Stata 12.

for segregation of whites from nonwhites.[118] This makes sense given that whites are much more likely to live in homogenous neighborhoods than are other racial and ethnic groups and given that the most pronounced political division is typically between whites and one or more minority groups, rather than among minority groups. These results suggest that political polarization depends on the degree to which *white* residents live in exclusively white neighborhoods.

I have argued that segregation generates political divisions because the politics of space become intertwined with race. It is possible though, that segregation is simply correlated with a more ideologically conservative white population which then generates divides in support for candidates. As the third column reveals, the relationship between segregation and polarization appears to be unaffected by the conservatism of the white population. In fact, the relationship between ideology and polarization is such that cities with more conservative white populations have smaller racial divides, underscoring the conclusion that racial polarization is not driven by ideological divisions. In the next section, I ask whether or not this polarization extends beyond support for candidates to a lack of consensus over policy. In short, I find that it does.

Diversity and Segregation in the Aggregate

Scholars have provided evidence that racially diverse places and those that are becoming increasingly diverse spend fewer public dollars on productive public goods (Alesina et al. 1999, Hopkins 2009). I have argued that segregation, not just diversity, should matter in municipal politics. In the first section of this chapter, I showed that segregation is related to political polarization, even after accounting for racial demographics. If it is the case that segregated populations are less able to come to a consensus over citywide policy decisions, we should also

[118] The 95% confidence intervals for these coefficients are nearly completely overlapping. Additionally, adding both coefficients to the same equation and running a post-estimation Wald test of equality indicates no significant difference.

see less support for government spending in segregated cities after accounting for racial demographics.

In order to analyze this hypothesis, I draw on the Census of Governments city and township expenditure data from 1982, 1987, 1992, 1997, 2002, 2007, and 2012.[119] To these data, I merged interpolated data from the 1980, 1990, 2000, and 2010 Census of Population and Housing, and from the 2007-2011 American Community Survey (ACS). In the broadest sample, I have data for 3,113 cities, which range in size from about 750 residents to more than 8 million.[120] To capture overall spending on public goods, I analyze the effect of segregation on per-capita *Direct General Expenditures.*[121] I follow this with analyses of operations expenditures on specific budgetary categories including *Roads and Highways, Police, Parks, Sewers*, and a combined category of *Welfare, Health, and Housing and Community Development.*[122] I also analyze per capita *Revenues* coming from the city's own residents (as opposed to intergovernmental revenues) as an indication of the burden of funding the populous is willing to bear.[123] All spending data are in thousands of 2012 dollars. Summary statistics are shown in appendix Table A6.3. As above, the primary independent variable is the *H* Index to measure segregation. In the tables and figures below, I present results using the two-group (white and nonwhite) index; results from the multi-group index and isolation index are very similar.

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119 Available at http://www2.census.gov/pub/outgoing/govs/special60/. Filename is "_IndFin_1967-2012.zip".
120 Data are available for many more cities in 2012 than in prior years (largely because I have Census data for more places in 2011). I only use observations from 2012 that are also included in 2007 to create a consistent panel.
121 All analyses are restricted to cities with non-zero expenditures in the category in question because the data do not distinguish between zero expenditures and missing data.
122 Operations expenditure totals were generated by taking the total spending in each category less any capital expenditures in that particular year. The category of welfare, health, and housing/community development represents the primary expenditures by cities used to directly support people in economic need.
123 In contrast, the categorical expenditure variables include all spending on a certain target regardless of the source of the funds.

To account for the alternative explanation that diversity drives down spending, the analyses include the proportion of the population that is *Black*, *Asian*, and *Latino* as well as a measure of overall *Diversity*. Controlling for demographics also helps account for the fact that white and minority preferences for government spending differ. Racial and ethnic minorities support more government spending than whites on a large number of programs at all levels of government (Hutchings and Valentino 2004). In the aggregate then, we might expect cities with larger populations of racial and ethnic minorities to support more per capita expenditure, just as Boustan et al. (2013) find. But if my theory is right, cities with more segregation and similar shares of minority residents ought to witness smaller budgets and lower spending on public goods compared to cities with less segregation because the likelihood of cooperation ought to be fundamentally different in these types of places.

The analyses below also control for the total *Population* (logged), the proportion of the population *Over Age 65*, the proportion of the population with a *College Degree*, the proportion of each 100 residents *Employed as Local Government* workers, the proportion of households that *Rent* their home, and the *Median Household Income*. These controls are meant to capture demographic dimensions that affect both segregation and expenditures (through both preferences and need). For instance, we might expect cities with large populations of government workers to have higher levels of spending, while the reverse might be the case in cities with older populations. An important alternative explanation for a negative relationship between segregation and spending could be city wealth. Segregated cities might be poorer cities for some reason, and may simply have fewer resources to spend on public goods. Controlling for the proportion of the city that rents and the median household income are intended to account for

this possibility.[124] Finally, I include fixed effects for cities. This allows me to analyze the effect of segregation within the same location over time and controls for the many factors (such as age of the city, differentials in costs for service provision, taxation powers and limits, etc.) that might lead cities to differ in expenditure patterns cross-sectionally. I cluster standard errors by city. I exclude from the analyses cities with only a single Census tract because the measure of evenness is constant (by definition).

I begin, in Table 6.2, by regressing per capita *Direct General Expenditure* on *Segregation* with the controls described above. Then, in the second column, I replace *Diversity* with *5 Year Changes* in racial group shares (following Hopkins 2009) to determine whether or not changes in diversity could be the driving factor.[125] In the third column, I add the mean *Ideology* of city residents (calculated from the GSS for all city residents as described above) to account for the possibility that segregated cities are more ideologically conservative. In alternate models (not shown), I add a control for renter segregation. The coefficient is insignificant and does not affect the results presented below.

[124] In alternative analyses I tested the inclusion of proportion of the city in poverty and median home values with no change to the pattern of results.
[125] Hopkins (2009) uses 10 year changes in racial group shares. I chose 5 years in order to preserve more observations in the time-series. The results are similar with 10 year changes.

Table 6.2: Effect of Segregation on Overall Per Capita City Expenditures

	Direct General Expenditure Per Capita			Direct General Exp w/ changing demographics			Direct General Exp w/ ideology control		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Segregation	-1.266	0.218	0.000	-1.141	0.231	0.000	-1.731	0.45	0.000
Diversity	0.199	0.133	0.134				0.060	0.257	0.816
% Black	0.726	0.179	0.000	0.854	0.168	0.000	0.117	0.641	0.856
% Asian	-0.88	0.288	0.002	-1.212	0.307	0.000	-0.565	0.74	0.445
% Latino	1.634	0.171	0.000	1.721	0.19	0.000	1.560	0.394	0.000
5 yr Δ % Black				-1.918	0.691	0.006			
5 yr Δ % Latino				-1.695	0.725	0.02			
5 yr Δ % Asian				-1.389	1.073	0.196			
Median Income (1000s)	0.006	0.001	0.000	0.005	0.002	0.001	0.009	0.003	0.001
% Local Gov. Employees	-0.004	0.015	0.787	-0.007	0.017	0.683	-0.077	0.051	0.132
% Renters	0.387	0.318	0.223	0.181	0.311	0.560	-0.123	0.693	0.860
% Over 65	0.458	0.597	0.443	0.639	0.453	0.158	-1.139	0.887	0.200
% College Grad	5.114	0.434	0.000	5.806	0.433	0.000	6.66	1.23	0.000
Population (logged)	-0.36	0.045	0.000	-0.439	0.07	0.000	-0.551	0.097	0.000
City ideology							-0.001	0.037	0.972
Constant	3.379	0.441	0.000	4.268	0.675	0.000	6.358	1.317	0.000
N	16,831			14,284			2,524		
Number of Cities	3,113			3,113			395		

Note: Linear regressions with fixed effects for cities, robust standard errors clustered by city presented.

Table 6.2 provides strong evidence that segregation and public goods spending are negatively related, even in the presence of changing demographics, diverse populations, and conservative residents. The effects of segregation are substantively meaningful and statistically significant. Increasing the segregation index from the 25th to 75th percentile (from .01 to .10) in the base model lowers per capita direct general expenditure from $1,413 to $1,299. A difference in total spending of more than $100 per resident could dramatically affect the quality of public goods that individuals experience given that the average per capita operating expenditure on police is about $190 and about $51 on parks. In Table 6.3, I show that the depressive effect of segregation extends to individual categories of public goods spending as well.

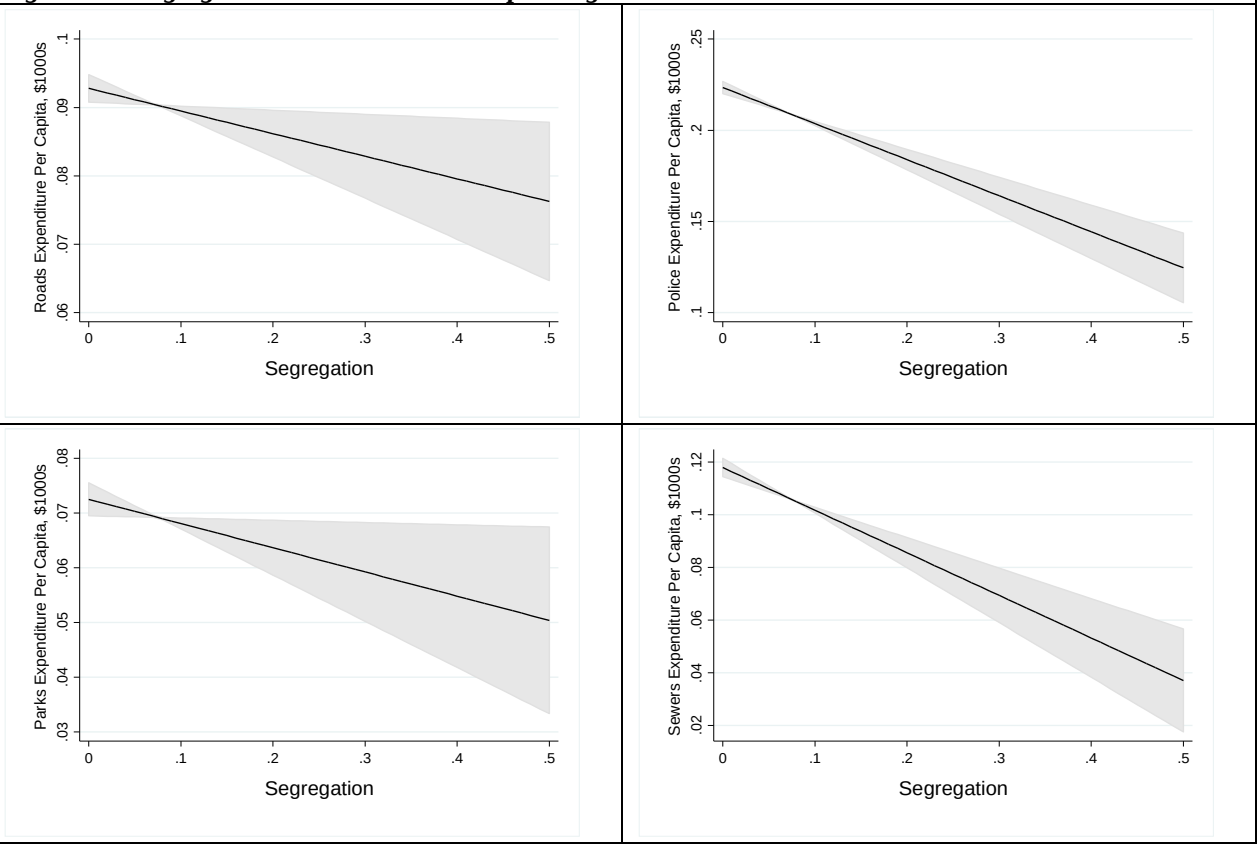
Table 6.3: Effect of Segregation on Public Goods

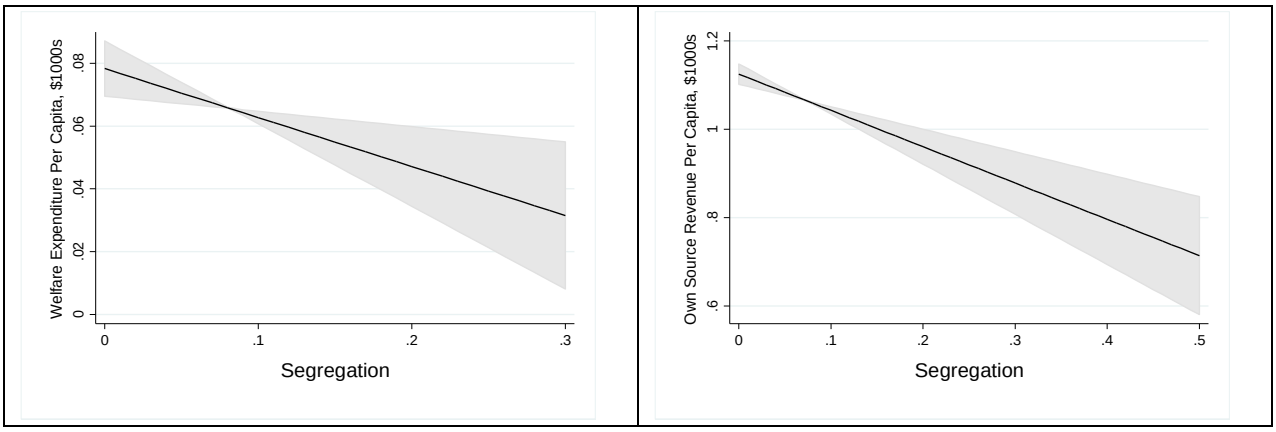
	Roads			Law Enforcement			Parks			Sewers			Housing/Welfare			Own Source Rev		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	B	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t||
Segregation	-0.033	0.01	0.02	-0.198	0.02	0.00	-0.044	0.02	0.03	-0.162	0.02	0.00	-0.156	0.05	0.00	-0.822	0.16	0.00
Diversity	0.017	0.01	0.06	0.060	0.01	0.00	0.012	0.01	0.25	0.041	0.01	0.00	-0.023	0.02	0.35	0.136	0.09	0.13
% Black	0.039	0.01	0.00	0.167	0.02	0.00	0.024	0.02	0.13	0.005	0.02	0.78	-0.013	0.07	0.86	0.321	0.13	0.01
% Asian	-0.069	0.02	0.00	-0.083	0.03	0.02	-0.069	0.03	0.01	-0.155	0.04	0.00	0.084	0.07	0.26	-0.508	0.23	0.02
% Latino	0.018	0.01	0.12	0.361	0.02	0.00	0.031	0.01	0.01	0.088	0.02	0.00	0.144	0.03	0.00	1.303	0.12	0.00
Median Income (1000s)	0.000	0.00	0.00	0.000	0.00	0.11	0.000	0.00	0.01	0.000	0.00	0.00	0.00	0.00	0.57	0.006	0.00	0.00
% Local Gov. Employees	0.000	0.00	0.81	-0.001	0.00	0.52	0.001	0.00	0.38	-0.002	0.00	0.28	-0.009	0.00	0.01	-0.006	0.01	0.64
% Renters	0.030	0.02	0.11	0.085	0.03	0.00	0.026	0.02	0.22	0.188	0.03	0.00	0.075	0.05	0.11	0.501	0.26	0.05
% Over 65	0.149	0.03	0.00	0.191	0.05	0.00	0.174	0.04	0.00	0.076	0.06	0.17	-0.081	0.08	0.29	0.648	0.47	0.17
% College Grad	0.189	0.02	0.00	0.842	0.04	0.00	0.399	0.04	0.00	0.382	0.04	0.00	0.447	0.09	0.00	4.452	0.37	0.00
Population (logged)	-0.020	0.00	0.00	-0.06	0.00	0.00	-0.006	0.00	0.02	-0.027	0.00	0.00	-0.024	0.01	0.00	-0.229	0.03	0.00
Constant	0.197	0.03	0.00	0.548	0.05	0.00	0.006	0.03	0.85	0.215	0.04	0.00	0.262	0.09	0.00	1.894	0.33	0.00
N	16,642			16,673			15,809			13,832			13,203			16,830		
Number of Cities	3,089			3,083			3,020			2,840			2,754			3,113		

Note: Linear regressions with fixed effects for cities, robust standard errors clustered by city presented.

Clearly, spending on public goods is lower in cities with greater segregation. Across all six categories displayed in Table 6.3, segregation exerts a significant negative effect. Figure 6.1 presents these results graphically.

Figure 6.1: Segregation and Public Goods Spending





Note: Figures show the predicted relationship between Theil's H segregation index and per capita spending on public goods in constant 2012 dollars. Gray shading represents 95% confidence intervals.

Tables 6.2 and 6.3 also reveal that while segregation is negatively related to public goods investment, more diverse communities are mostly associated with higher levels of spending as the positive coefficients on diversity and on percent black and Latino indicate. Given that racial and ethnic minorities are both more supportive of public goods spending and more likely to live in segregated places (which see less support for public goods), it is important to ask what the overall impact of these countervailing effects is. Table 6.4 shows how segregation affects public goods provision across the range of values of diversity. I divide the sample of cities into quintiles of percent nonwhite (with 3,366 city-years in each quintile) and then, after estimating the model displayed in column 1 of Table 6.2, I predict Direct General Expenditure per capita at the minimum and maximum values of segregation for each quintile, holding all other variables at their mean values given the quintile. Table 6.4 shows the difference in these predicted values for each quintile of percent nonwhite.

Table 6.4: Change in Direct General Expenditure Per Capita by % Nonwhite at Minimum and Maximum Levels of Segregation

Quintile of % Nonwhite	Average % Nonwhite	Average Segregation Level	Change in Predicted Direct General Expenditure Per Capita*	95% Confidence Interval
1	4%	0.030	-$490	(-$656, -$325)
2	10%	0.041	-$870	(-$1163, -$576)
3	19%	0.066	-$970	(-$1298, -$643)
4	33%	0.108	-$930	(-$1244, -$616)
5	65%	0.125	-$846	(-$1132, -$561)

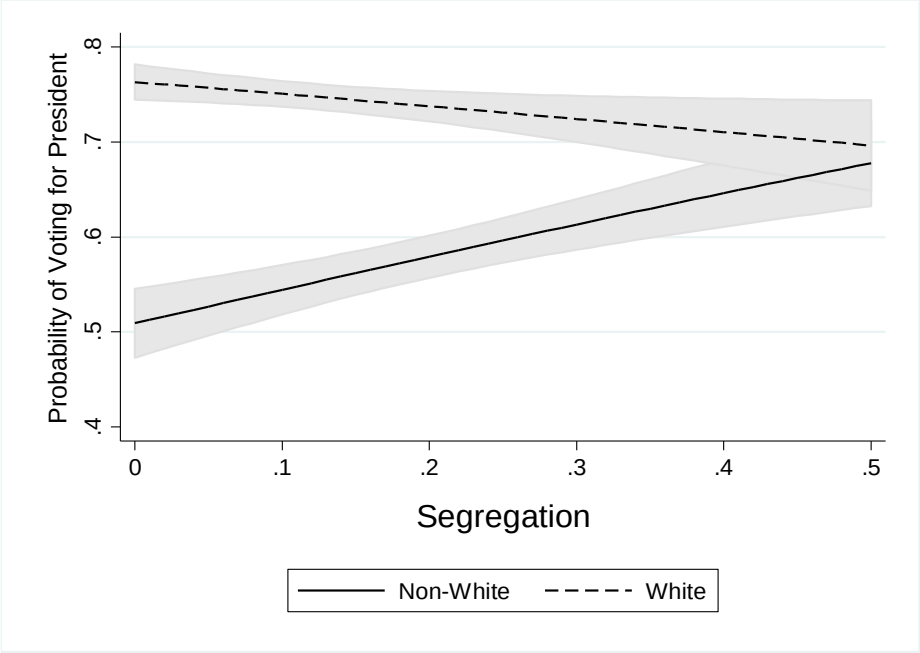
*Predicted values generated from regression displayed in column 1, Table 7.2. Change is from the minimum to maximum level of segregation within a quintile of percent nonwhite.

Table 6.4 reveals substantial declines in direct general expenditure as segregation increases, regardless of the size of the minority population. Segregation has the largest effect in cities with moderately sized minority populations (where minorities comprise 19-33% of the population), but even in majority-minority cities (where minorities make up more than 50% of the population) and cities that are overwhelmingly white, increasing segregation decreases investment in public spending. The fact that segregation has the most pronounced effect in the middle quintiles offers indirect evidence that it is white residents responding to significant minority concentrations driving the negative relationship between segregation and public goods spending. An alternative possibility is that low turnout among minority residents drives this pattern. As Figure 6.2 shows, this case is extremely unlikely, given that turnout among minority residents is actually higher in more segregated cities while turnout among whites is lower.

To test this possibility, I draw on data from the General Social Surveys conducted between 1998 and 2008; years for which I was able to determine respondents' city of residence

(see Chapter 7 for additional details on this dataset). I estimate the probability that a respondent *Voted* in the most recent presidential election. Using logistic regression, I regress this variable on the level of *Segregation* in the respondent's city. To understand how segregation operates differently for different groups, I interact the level of segregation with a dummy variable coded 1 if the respondent is *White and Non-Hispanic*, and 0 otherwise. I control for the respondent's level of *Education*, whether or not they have *Kids at home*, their *Gender*, whether or not they are *Married*, their *Income*, and whether or not they are a *Government Employee*.

Figure 6.2: Correlation between Segregation and Turnout by Race



At low levels of segregation, white turnout is much higher than minority turnout, but the lines converge as segregation increases. Furthermore, using the racial polarization dataset described in the first section of this chapter, I find that turnout and segregation are positively

correlated in the aggregate. These patterns strongly suggest that politics is more contentious in more segregated communities. Thus, a lack of participation by residents who support high spending is not likely to be the cause of lower public goods investment.

However, even with controls, one might still worry about the causal relationship between segregation and spending. I have argued that segregation should suppress public goods spending. However, it is entirely possible, perhaps quite likely, that some unmeasured set of factors affect both spending and segregation (or that the reverse is true, and spending levels affect segregation patterns). Since we cannot randomly assign segregation to determine its effect on city spending, I use an instrumental variable approach to study the relationships.

A great many factors affect residential location and the distribution of different types of residents across neighborhoods. One set of factors that affects both property values and the ability for communities to maintain a preferred degree of homogeneity are natural and manmade barriers. For instance, freeways and railroad tracks frequently divide more desirable and less desirable parts of town (Ananat 2011). But railways and freeways are often built with the intent to segregate racial communities (Bayor 1996). Instead, I focus on waterways (including large streams and rivers), which vary in number across cities and are arguably exogenous to segregation and spending given that they are not man-made. The use of waterways as an instrumental variable was introduced by Hoxby (2000) who used streams to estimate the governmental fragmentation of metropolitan areas. Cutler and Glaeser (1997) rely on Hoxby's waterways data as an instrument for metropolitan area racial segregation. My instrument differs in two ways. First, and most importantly, my data capture waterway counts and segregation patterns at the *city* level rather than at the metropolitan-area level. Secondly, I use a different source file for the waterways data and a different method for determining whether a waterway

ought to be counted within the boundaries of a community.[126] In order to use waterways as an instrument for segregation, I gathered the "rivers and streams" geographic information system map file from the National Hydrologic Remote Sensing Center which is part of the National Oceanic and Atmospheric Administration (an agency in the US Department of Commerce).[127] I added Census TIGER Line boundary files for all places in the United States as of 2000.[128] I then generated counts of waterways for each place and added these counts to the finance data described previously. Overall, the correlation between the number of waterways and the H Index is a powerful 0.37, and the F-statistic on the excluded instrument is 3,999, which is considerably higher than the typical target of 10.[129]

The current analyses use the same dependent variables as were presented in Tables 6.2 and 6.3 (per capita spending on various public goods). The number of waterways is used as an instrument for the *H* Index. Waterways are also correlated with other characteristics that are important to both segregation and spending patterns. The most important of these characteristics is the size of the population which is correlated with both the number of waterways and the level of segregation. People have settled near waterways since antiquity, and larger cities are also much more likely to be segregated than smaller cities (perhaps because there are more neighborhoods from which to choose). To account for this, I include logged population

[126] Hoxby (2000) uses a hand count of streams that are 3.5 miles in length and "of a certain width" supplemented with data from the Geographic Names Information System which lists the latitude and longitude of smaller streams. Instead, I use geographic information system maps as described in the main text and include all large streams and rivers regardless of length and width. Hoxby (2000) attributes a stream to a Metropolitan Statistical Area (MSA) if it terminates in the MSA (Rothstein 2007), whereas my analysis attributes a waterway to a community if it flows through the community at all (not just at its origin or destination).

[127] The "rivers and streams" shape file is available at: http://www.nohrsc.noaa.gov/gisdatasets/. It was most recently updated in 2008.

[128] Boundary files are available for download by state here: http://www2.census.gov/geo/tiger/TIGER2010/PLACE/2000/

[129] This F-statistic is drawn from a simple two-stage regression instrumenting segregation with waterways and including no additional controls.

as an instrument in the first stage.[130] In both the first and second stage regressions, I include the same control variables as presented in Table 6.2, with two changes. Because the number of waterways is constant in my dataset, I do not add fixed effects at the city level.[131] Instead, I include fixed effects for region and year. Secondly, I add a lagged version of the dependent variable to account for the high correlation between observations over time for the same city and the fact that local budgets are typically changed incrementally from prior years. The results from this instrumental variable approach are displayed in Table 6.5. For presentation purposes, the first stage results are relegated to appendix Table A6.4.

[130] In alternative specifications, I use the number of waterways per capita as the instrument. The pattern of the results is exactly the same.
[131] The omission of fixed effects allows for the inclusion of all cities regardless of the number of Census tracts.

Table 6.5: Effect of Segregation on City Expenditures, Instrumental Approach												
	Direct General Exp			Roads			Law Enforcement			Parks		
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|
Segregation instrumented	-3.806	1.09	0.00	-0.385	0.05	0.00	-0.353	0.10	0.00	-0.025	0.02	0.18
Lagged DV	0.858	0.00	0.00	0.490	0.00	0.00	0.966	0.00	0.00	0.822	0.00	0.00
Diversity	-0.418	0.38	0.27	-0.027	0.02	0.15	-0.001	0.04	0.97	0.004	0.01	0.57
% Black	0.798	0.36	0.03	0.080	0.02	0.00	0.080	0.03	0.02	0.000	0.01	0.98
% Asian	-0.848	0.99	0.39	-0.088	0.05	0.07	-0.082	0.09	0.38	-0.029	0.02	0.08
% Latino	1.121	0.31	0.00	0.086	0.02	0.00	0.078	0.03	0.01	0.007	0.01	0.18
Median Income (1000s)	0.012	0.00	0.00	0.001	0.00	0.00	0.001	0.00	0.00	0.000	0.00	0.00
% Local Gov. Employees	0.276	0.03	0.00	0.017	0.00	0.00	0.020	0.00	0.00	0.002	0.00	0.00
% Renters	2.627	0.39	0.00	0.159	0.02	0.00	0.159	0.04	0.00	0.033	0.01	0.00
% Over 65	2.260	0.81	0.01	0.270	0.04	0.00	0.233	0.08	0.00	0.089	0.01	0.00
% College Grad	-0.495	0.62	0.42	-0.013	0.03	0.68	-0.051	0.06	0.39	0.045	0.01	0.00
Constant	-2.034	0.31	0.00	-0.105	0.02	0.00	-0.149	0.03	0.00	-0.026	0.01	0.00
N	2,669			25,121			25,034			23,197		
	Sewers			Welfare			Own Source Revenue					
	β	SE	P>|t|	β	SE	P>|t|	β	SE	P>|t|			
Segregation instrumented	-0.393	0.06	0.00	-0.194	0.06	0.00	-3.344	0.95	0.00			
Lagged DV	0.082	0.01	0.00	0.936	0.00	0.00	0.712	0.00	0.00			
Diversity	0.075	0.02	0.00	0.000	0.02	1.00	-0.373	0.33	0.26			
% Black	0.054	0.02	0.02	0.065	0.02	0.01	0.686	0.31	0.03			
% Asian	-0.229	0.06	0.00	-0.008	0.05	0.87	-0.909	0.86	0.29			
% Latino	-0.048	0.02	0.01	0.045	0.02	0.01	1.01	0.27	0.00			
Median Income (1000s)	0.000	0.00	0.89	0.000	0.00	0.57	0.013	0.00	0.00			
% Local Gov. Employees	0.000	0.00	0.88	0.007	0.00	0.00	0.294	0.03	0.00			
% Renters	0.082	0.02	0.00	0.090	0.02	0.00	2.573	0.34	0.00			
% Over 65	0.344	0.05	0.00	0.109	0.05	0.03	2.435	0.71	0.00			
% College Grad	0.057	0.04	0.11	0.009	0.04	0.81	-0.433	0.54	0.42			
Constant	0.007	0.02	0.69	-0.057	0.02	0.00	-2.025	0.27	0.00			
N	20,258			17,827			25,671					

Note: Two stage least squares regressions with fixed effects for regions and year (not shown); Instrumented: Two-group H Index of segregation; Excluded Instruments: # of Waterways, Population logged.

Regardless of the statistical approach used, segregation appears to have a powerful, depressive effect on public goods provision in cities. The pattern of results in Table 6.5 reflects the OLS regression findings presented in Table 6.2. After accounting for demographic differences, cities with more segregation tend to have smaller budgets, they tend to extract fewer resources from their residents, and spend less on roads, policing, parks, sewers, and support for the poor.

But perhaps lower spending is what residents prefer. After all, many elections have been won on platforms promising austerity and frugality. In the final section of this chapter, I explore what the consequences of low spending might be by analyzing a universally disliked event: sewer overflows.

Segregation and Sewer Overflows

The federal Environmental Protection Agency (EPA) monitors municipal sewer systems for overflow events. According to a 2004 EPA report to Congress, approximately 860 billion gallons of untreated wastewater were released into communities between 2001 and 2003 when sewer systems' capacities were exceeded. Any single overflow might occur for many reasons – excessive wet weather, pipe blockages, equipment failure, or insufficient capacity. However, generally, as Tessin (2009) explains:

> The performance of a sewer system is strongly related to capital fund-raising….Without adequate investment, excessive groundwater can enter sewers through cracked pipes and ingrown tree roots. Aging pipes can break and send sewage to the surface. Growing populations can cause wastewater flow to exceed the system's design capacity….For these reasons, local governments that do not invest enough capital typically experience more sewer overflows and other system failures…(p168).

Some federal and state grants are available for sewer system maintenance, but the vast majority of funding to reduce overflows comes from local sources (EPA 2004). According to

my data, the most segregated cities spend about $200 less per capita each year on their sewer systems. In the aggregate, this translates to an average of about $60,000 less per year spent on sewers (after controlling for all of the other demographic variables included in the regressions above). When city engineers plan, build, extend, and repair sewer systems, they take into account variables like population growth and average precipitation, as well as potential deviations from those estimates.

Analyses of effective or responsive governmental policy typically needs to take into account variation in constituent preferences. For instance, a community that spends very little on protection of open space or on recycling may be accurately representing the views of its residents. Sewer overflows are different. No one wants a river of fecal matter running down their street or flooding their basement. Thus, it seems reasonable to assume that more frequent overflows are, without qualification, worse than fewer overflows. That said, voters and sewer engineers may not agree on the level of resources needed to prevent overflows and therefore, raising funds for capital improvements may be challenging. If it is the case, as I have asserted above, that more segregated cities will have more trouble coming to political consensus about public goods provision, then we ought to expect more segregated cities to witness more sewer overflows – all else equal. In order to determine whether or not this is the case, I utilize data collected by the Environmental Protection Agency in 2004.

In this data collection, the EPA gathered information on overflows from 25 state environmental agencies between 2001 and 2003.[132] In total, the EPA reported about 35,000 different overflow events from several thousand sewer agencies. The EPA data do not include any geographic identifiers other than the name of the sewer agency, and so, I matched these

[132] The data were generously provided to me by Jeff Tessin who had secured the data from an EPA staff member for his PhD dissertation.

names to cities by hand. After dropping cases in which the sewer operator was not a municipal government (e.g. metropolitan water districts or county governments), and cases in which the EPA data provided insufficient detail to identify the municipality, I determined the location of 19,817 overflow events. I aggregated these events to the city level and was able to match these data to segregation measures and Census data for 1,417 cities.

The median number of overflows during this period was 2, while the mode was 1. A few cities with enormously high numbers of overflow events pull the mean to 50. For this reason, I take the natural log of the number of overflow events for each city and standardize it by the city's population. This *Logged Overflows Per 1000 Persons* measure serves as my dependent variable. My main independent variable is the city's *H* Index of racial segregation measured in 2000 if available and 2010 if not. I control for the natural log of the *Total Population* to account for the possibility that cities serving more people are likely to have more advanced engineering for their sewer systems by necessity. I add fixed effects for states for two reasons. The first is that the EPA data collection gathered statistics form state agencies which may have had different reporting standards. The second reason is to account for the different environmental, regulatory, and funding environments cities in different states face. In a second regression, I add controls for other city demographics. I add the share that *Rents* their homes to account for the possibility that homeowners may be more likely to act politically to prevent overflows. I include the share of the population that is *Urban* to capture the difficulties rural areas may face in providing sewer systems to a dispersed population. I include the share of the population that is *Black*, *Asian*, and *Latino* to determine whether or not diversity alone can account for poor performance. I add the city's *Median Household Income* and *Per Capita Subventions* to measure the city's capacity to

raise funds for sewer maintenance and expansion. The results of these OLS regressions with robust standard errors are shown in Table 6.6 (summary statistics are in appendix Table A6.5).

Table 6.6: Correlation Between Segregation and Sewer Overflows

	β	SE	P>|t|	β	SE	P>|t|
Segregation	2.166	0.53	0.00	2.398	0.78	0.00
Population (logged)	-0.347	0.05	0.00	-0.325	0.07	0.00
% Renters				-0.424	0.40	0.29
% Urban				-0.129	0.09	0.16
% Black				-0.524	0.37	0.16
% Asian				3.813	1.01	0.00
% Latino				-0.080	0.28	0.77
Median Income (1000s)				-0.001	0.00	0.66
Subventions Per Capita (1000s)				-0.031	0.01	0.00
Constant	3.678	0.53	0.00	3.554	0.59	0.00
N	1,417			1,417		
R^2	0.199			0.207		

Note: Linear regressions with fixed effects for states, robust standard errors presented.

The data reveal a significant correlation between segregation and sewer overflows. Living in a city with very little segregation, one can expect about 1.5 overflows per year on average. This increases to nearly 2.5 overflows in cities at the 95th percentile of the segregation distribution. Not only do segregated cities see lower spending on public goods, but they also witness worse performance as well.

Conclusion

The evidence presented here indicates that racial segregation plays a significant role in access to public goods. Segregated cities are comprised of homogeneous neighborhoods embedded in larger diverse communities. While African Americans, Latinos, and Asians are today, fairly likely to live as neighbors, whites remain in isolated enclaves. Because local governmental decisions often concern spatial allocation, neighborhoods are important municipal

actors in local politics. In more segregated places, neighborhood interests become overlaid with racial division. Segregated cities are more racially polarized in elections and may be less likely to generate policy consensus. The result is that cities with more segregation have smaller public goods budgets. Segregated cities raise fewer dollars from their residents and spend less money on roads, law enforcement, parks, sewers, welfare, housing, and community development. This low spending may have significant consequences. For example, segregated cities also see more sewer overflows.

Patterns of residential location reveal that white residents are more likely than people of color to live in cities with low levels of segregation. In my dataset, nearly 74% of nonwhite residents live in cities in the top quintile of the segregation distribution, compared to only 48% of whites. What this means is that compared to whites, nonwhites are much more likely to live in communities that struggle to generate adequate public goods for their residents. Not only are whites segregated from racial and ethnic minorities within cities, but they are also segregated from people of color across city lines. This fact means that access to public goods is segregated along racial lines as well. As the nation has become more diverse, it has also become more unequal. Segregation and public goods play important roles in linking these phenomena.

Chapter 7: The Local Roots of Modern Conservatism

Between the late 1940s and mid-1960s, fights over racial integration pervaded the politics of America's cities. Throughout the United States, residents battled over the integration of public schools, public transportation, pools, parks, golf courses, and of course – neighborhoods. In detailed case studies, historians have shown that white resistance to desegregation in urban centers across the country, gave rise to a new rhetoric that emphasized the protection of private property and homeowners' rights (Kruse 2005, Lassiter 2006, Self 2003, Sugrue 1996). These historical studies argue that the rise of conservatism and Republican allegiance associated with suburban America today was actually rooted in the conflictual racial politics of central cities. In this chapter, I provide evidence that these patterns were widespread. I show that battles over the control of public space and public goods in postwar urban America contributed to the transformation of the demographic landscape and affected public opinion. People who would come to live in segregated neighborhoods, either by choice, compulsion, or happenstance, developed political attitudes and loyalties that differed significantly from similarly situated residents in more integrated places.

First, I show that federal school desegregation orders generated increases in the number of segregated neighborhoods in metropolitan areas. In this analysis, I take advantage of the randomness desegregation order timing to substantiate the link. Then, I provide evidence that the relative whiteness of a neighborhood in 1970 is a powerful predictor of political attitudes and loyalties today. People who live in places that were whiter than their metropolitan area in 1970 were more likely to vote for the Republican presidential candidate in 2008 and are more conservative than their individual attributes (e.g. race, gender, marital status, age, education, income, presence of children) would otherwise predict. Conversely, those who live in places that

were more diverse in 1970 are more liberal today. However, even with a set of individual-level controls, it is difficult to convincingly estimate the effect of neighborhoods on public opinion. Some unmeasured characteristic might cause certain neighborhoods to be more or less diverse than the larger metropolitan area in 1970, and for individuals who live there to be more or less liberal. Given existing evidence that racial attitudes became a more important predictor of vote choice and public opinion during this same period (Carmines and Stimson 1989), it is important ensure that these relationships are being driven by the attributes of neighborhoods and not omitted individual-level variables. To do this, I instrument for the relative whiteness of neighborhoods using two geographic features: land elevation (controlling for waterfront areas) and distance from the nearest big city.

The consequences of segregation on individuals' life chances are well known; and as Thomas Sugrue (2015) writes, "the effects…are devastating."[133] Segregation increases inequality on many different socio-economic dimensions (Cutler and Glaeser 1997, Ananat 2011). The results presented here indicate that segregation also has powerful political consequences - increasing divisions in both public opinion and voting behavior.

Entanglements of Ideology and Integration

At the onset of the Second World War, the United States was already a very segregated nation. All large cities had clearly defined neighborhoods inhabited by people of color and others inhabited by whites – a pattern generated by both private choices and public policies (Massey and Denton 1988). [134] As a result of the economic collapse during the Great Depression

133 https://www.washingtonpost.com/opinions/its-not-dixies-fault/2015/07/17/7bf77a2e-2bd6-11e5-bd33-395c05608059_story.html

134 However, on the whole, the United States, both rural and urban, was still overwhelmingly white in 1940. About 10% of the population was black, about 1.7% of the population could be considered Hispanic/Latino, and about

and then material scarcity during the war, the nation faced a severe housing shortage during the 1940s. When increasing numbers of blacks moved from rural areas into cities and from the South to the North and West, the boundaries of existing black neighborhoods were pushed to their limits. In the Southwest, the Latino population also swelled with wartime employment.[135] These pressures resulted in explosive social and policy conflicts along racial lines. Because city governments had the power to zone, to permit development and locate nuisances, and thus to determine the value of property, these fights were central to city politics. As Self (2003) argues, "the effects of property [valuation] are far-reaching…They structure all kinds of interactions - from where one can buy a home to where politics is organized, from how police interact with neighborhoods to where children go to school. The struggle for the postwar city was over no less than the power to control and organize space…" (p18).

In response to postwar demographic changes, white homeowners sought to protect their neighborhoods (which they considered to be the reward for their hard work and frugality) from disruption and disorder. In the minds of many, pursuit of these goals required racial exclusivity. Sugrue (1996) reports that in Detroit, as elsewhere, "a majority of whites looked to increased segregation as the solution to [the] 'colored problem'" (p215). Whites, particularly those who owned their homes, believed that they had a right to certain neighborhoods and the public benefits (e.g. schools, safety) associated with those spaces. They understood minority demands for integration and court ordered desegregation plans as undermining this entitlement (Kruse 2005, p126). Whites justified exclusion with fiscal arguments; claiming that, "since Negroes are

0.1% Asian. http://www.latinamericanstudies.org/immigration/Hispanics-US-1850-1990.pdf; https://www.census.gov/population/www/documentation/twps0076/twps0076.pdf

[135] http://www-bcf.usc.edu/~philipje/Segregation/Haynes_Reports/Contours_PRR_2001-04e.pdf. Hundreds of thousands of Mexican descendants were deported during the Great Depression, so the overall Latino share of the population changed little.

so poor and pay virtually no taxes, they are actually not entitled to get more public services than the whites care to give them…" (Myrdal 1944, p336). When blacks *did* receive benefits, it was believed that whites unfairly bore the financial burden of their support. To illustrate this point, Kruse (2005) quotes a segregationist poem that made rounds in Atlanta in 1957:

> Po' white folks must labor, 'tween sun and sun,
> To pay welfare taxes whilst we has de fun,
> We doan pay no taxes, we doan make no goods,
> We just raise little niggers, way back in the woods.... (p127).

Above all else, whites feared that integration would jeopardize their single largest investment – the value of their home (Helper 1969), as well as the quality of their neighborhood (Kruse 2005). The tight coupling between property values, public goods, and racial exclusivity was inexorably tied to the racism embedded in the real estate market (Hayward 2013) and the poor public goods that cities had provided to neighborhoods of color in decades past (Myrdal 1944, Torres-Rouff 2013). Kruse (2005) explains that, "by the time white homeowners confronted racial transition at their neighborhood's borders, the American real-estate industry had completely embraced the idea that such racial transition would, without doubt, lead to a devastating decline in property values" (p60). Public policies like redlining and expulsive zoning[136] and private actions like racial steering and white flight would make this relationship true over the long run.[137]

[136] Expulsive zoning is the practice of siting industrial, semi-industrial, or other nuisances in neighborhoods of color in order to both preserve white neighborhoods and induce black movement into particular parts of the city.
[137] In the short run, blacks paid much higher prices than whites for comparable housing (Cutler and Glaser 1997). This fact was what made it so lucrative for individual whites to abandon neighborhood protection and move to the suburbs. In Atlanta, Kruse (2005) analyzes the property values in a neighborhood that transitioned from white to black between 1950 and 1960, and finds that the property values rose 27 percent over this decade.

Although many whites agreed on the desirability of residential segregation,[138] they were stymied by various hurdles. The Supreme Court had ruled racial zoning (the designation of certain neighborhoods as being inhabitable only by whites) unconstitutional in 1917, so a perfectly direct policy approach to residential segregation was not an option.[139] Instead, the preservation of white communities required collective action to prevent individual homeowners from selling or leasing to minority residents. As minority populations expanded and white homeownership rates skyrocketed, hundreds of white homeowners' organizations arose in the 1940s, 50s, and 60s (Sugrue 1996, Kruse 2005).[140] Such organizations were often created by real estate developers to protect the value of their investment. This was a charge taken seriously by property owners. These (typically all white) "civic associations, productive associations, improvement associations, and homeowners' associations" (Sugrue 1996, p211) fought the building of public housing in their neighborhoods, sought representation on planning boards, and battled open housing laws (Self 2003).[141] Importantly, they relied on racial restrictions in housing deeds (and racism in the real estate market) to maintain neighborhood exclusivity. But the Supreme Court ruled restrictive covenants unenforceable in 1948 (*Shelley v. Kraemer*), and an open housing movement swept the nation. Then, in the 1950s, other tools of segregation came under fire as the court struck down separate-but-equal accommodations in a series of cases.[142]

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[138] In 1964 only 27% of white Americans supported general integration (Schuman et al 1985).
[139] Many white neighborhoods also utilized violence to defend their borders (Meyer 2000, Hirsch 1983). Although tolerated (even encouraged) by the police and political establishment of some cities, murders and arson were technically illegal as well.
[140] In some cases, the link between segregationists and homeowners' groups was direct. For example, the head of Atlanta's West End Cooperative Corporation had gotten his start in community organizing as the head of Klavern No 297's Housing Kommittee (Kruse 2005 p54).
[141] They also served as social organizations welcoming new neighbors and organizing block parties (Sugrue 1996).
[142] e.g. *Muir v. Louisville Park* 1953, *Brown v. Board of Education* 1954 & 1955, *Holmes v. Atlanta* 1955, *Dawson v. Baltimore* 1955, *Rice v. Sioux City Memorial Park Cemetery* 1955, *Browder v. Gayle* 1956, *Burton v. Wilmington* 1961, *Johnson v. Virginia* 1963, *Simkins v. Cone Memorial Hospital* 1963, *Watson v. City of Memphis* 1963.

By this time, nearly all cities utilized zoning in some fashion and many invoked the power of eminent domain to shape development through, for example, the permitting of multi-family housing, the razing of slums, and the placement of highways, public housing, and industry. In the past, white homeowners had successfully used these tools to configure residential demography (Nightingale 2006) – but they became even more important in the face of new court decisions and the rising Civil Rights Movement.[143] At the same time, racial violence continued to erupt. However, local elites were committed to maintaining peace in their cities (Ogorzalek 2017). So, in order to convince city governments to defend their turf, white neighborhoods needed to change their approach.

In city after city, white middle class, homeowners turned away from claims based on racial exclusivity and began to press their demands in terms of rights; a tactic Sugrue (1996) terms "defensive localism" (p210). White residents fought for the, "'right' to select their neighbors…the 'right' to do as they pleased with their private property…and the 'right' to remain free from what they saw as dangerous encroachments by the federal government," (Kruse 2005, p9). Local governments responded with neighborhood protection by pursuing "racial stability through spatial apartheid" (Lassiter 2006, p52). In the South, these arguments were the moderate path – a response to violent white supremacy on the right and integrationists on the left (Lassiter 2006, Kruse 2005). The fact that rights-based language gained ground in all regions of the United States meant that it offered a powerful basis for the rise of a national movement.

[143] Throughout this period, neighborhood organizations also sought to maintain the color line using private mechanisms as well. For instance, some organizations raised funds to repurchase homes sold to black families in order to sell them back to whites. They also pressured real estate agencies and lenders to refuse to sell to black buyers. Additionally, they set fire to homes on the black market and newly purchased homes by black owners (Kruse 2005, Sugrue 1996). The problem with such tactics is that they were always susceptible to a sort of prisoner's dilemma. It was incredibly lucrative for a single white homeowner to sell her home to a black family and this idea made individual white owners skittish about neighborhood transition. Neighborhood organizations constantly urged owners to think of the common good rather than their bottom line, but frequently failed.

The discourse had several facets. Subscribers claimed support for racial integration in theory (so as to distinguish themselves from the ugliness of Jim Crow), but angrily opposed government intervention in racial uplift or equalization (Lassiter 2006, p137). In fact, integration was typically viewed in zero-sum terms – gains for blacks equated to losses for whites. Government attempts to produce equal outcomes were understood to be an elevation of minority rights above those of the majority (Sugrue 1996, p227), a form of "reverse discrimination" (Lassiter 2006, p123). Policy solutions to redress inequality were cast as the work of an insidious, "'liberal elite' made up of judges, intellectuals, and government bureaucrats" (Hall 2005, p5).

Further drawing on racialized beliefs about the distribution of tax burdens, neighborhood defenders argued that they should not have to pay for public benefits or welfare for those who did not contribute to the public pool. So when people of color demanded, and then the court ordered, desegregation of public spaces and residential communities, these views culminated in all out tax-revolts among white residents. In cities like Atlanta, whites urged the city government to eviscerate the public budget, eliminate bus lines, as well as close pools and public parks (Kruse 2005). Whites voted down bonds for civic improvements, abandoned public schools, and railed against an activist government. In the end, many of these residents would leave the city altogether – packing up their belongings and their newly appropriated ideology and moving to the suburbs (Nall 2015, Boustan 2010).

Yet, suburban growth largely happened for market reasons that were unrelated (or at least, only tangentially related) to racial conflict in cities (Jackson 1985). As Chapter 1 revealed, by 1970, a plurality of the population lived in suburbs and more than 60% of Americans owned their homes. As the pace of suburbanization and homeownership picked up, arguments

surrounding neighborhood defense lost explicit racial designations of who contributed and who did not and who had a right to high property values and good services and who did not. As Self (2003) explains, the move away from making overt racial claims was, "intended to inoculate segregation and white privilege against charges of racism" (p268). This new language offered a "color-blind" approach to the maintenance of neighborhood boundaries. This rhetoric perpetuated the myth that residential segregation was a matter of economics and individual choice. White homeowners came to see segregation as the consequence of "meritocratic individualism" – not fostered by public policy or law (Lassiter 2006, p1). Those who lived in segregated minority neighborhoods could thus be blamed for their condition, making them undeserving of social assistance.

Maintaining exclusively white neighborhoods in the central city was possible with the help of cooperative city governments. But it was much easier in the suburbs, where a combination of public policies and private actions made homeownership only available to white residents (Jackson 1985, Hayward 2013). By 1970, neighborhoods (both within central cities and outside of them) that had maintained their whiteness despite the massive demographic shifts over the preceding 30 years had developed a distinctive, conservative approach to politics throughout the nation. Homeowners in these places expected low taxes, they rationalized racial segregation and inequality as the product of meritocracy, and they conflated white exclusivity with high property values (Self 2003, Lassiter 2006). They couched their demands in terms of protection of individual property rights. In so doing, they drew on a long tradition of American conservative principles emphasizing economic individualism, limited government, and equality of opportunity, but not outcomes (Feldman 1988, McClosky and Zaller 1984, Kinder 1998).

Nearly forty years later, these neighborhoods continued to foster distinctive politics. Whether or not new arrivals to defended neighborhoods had been involved in the earlier battles, they came to, "accept the politics born out of white flight all the same. They embraced a new middle class rhetoric of rights and responsibilities" (Kruse 2005, p245). The Republican Party came to embrace the neighborhood defenders. Starting in the 1960s and throughout the 1970s, Republicans positioned themselves as the party that would help whites to resist social change and impose order in their environments (Hetherington and Weiler 2009, Carmines and Stimson 1989). These ideals held sway in defended neighborhoods and residents dutifully sorted themselves into the Republican Party.

The arguments appropriated in support of neighborhood defense in the 1950s and 60s are still visible in politics today. In the 2012 presidential election, Republican nominee Mitt Romney proclaimed:

> There are 47 percent of the people who will vote for [the Democratic incumbent] no matter what…who are dependent upon government, who believe that they are victims, who believe the government has a responsibility to care for them, who believe that they are entitled to health care, to food, to housing, to you-name-it. That that's an entitlement. And the government should give it to them….These are people who pay no income tax…My job is not to worry about those people. I'll never convince them they should take personal responsibility and care for their lives (Corn 2013).[144]

Like the homeowners' organizations of the mid-century, Romney's statement invoked a class (not race)-centered view of deservingness. Forty-seven percent of the American public, Romney implies, "doan pay no taxes," and rely on government benefits for subsistence. Romney's claim

[144] More boldly, 2016 Republican nominee Donald Trump's first wife explained, "I have nothing against Mexicans, but they [come] here — like this 19-year-old, she's pregnant, she crossed over a wall ….She gives the birth in American hospital, which is for free. The child becomes American automatically. She brings the whole family, she doesn't pay the taxes, she doesn't have a job, she gets the housing, she gets the food stamps. Who's paying? You and me." http://nypost.com/2016/04/03/ivana-trump-opens-up-about-how-she-advises-donald-his-hands/

that these non-contributors do not take personal responsibility for their lives recalls the meritocratic arguments white homeowners made in the past about their success and their neighborhoods. It is unsurprising then, that defended neighborhoods have offered disproportionate support to Republican candidates and conservative policies in recent years.

The Effect of Context

To say that neighborhoods condition political views and actions is not novel. A great deal of research investigates contextual effects on public opinion and political behavior. A significant portion of this literature focuses (as I do here) on the community's racial composition.[145] Some scholars find that diversity produces tolerance (e.g. racial contact theory; Allport 1954, Oliver 2010, Sigelman et al. 1996). Others find the reverse - that large minority populations are related to racial intolerance and lack of support for spending on race-focused or race-coded policies (e.g. racial threat theory; Key 1949, Gay 2006, Huckfeldt 1986, Orey 2001, Taylor 1998, Bobo and Hutchings 1996, Blalock 1967, Alesina and Glaeser 2004, Tolbert and Hero 1996, Plotnick and Winters 1985, Enos 2016, Baybeck 2006). Scholars also find a negative relationship between diversity and support for taxation, spending, and public goods provision more generally (Alesina et al. 1999; Glaser 2002; Alesina and Spolaore 1997; Easterly and Levine 1997; Poterba 1997; Habyarimana et al. 2007, 2009; Putnam 2007; Cutler et al. 1993; Goldin and Katz 1999, Hopkins 2009, Vigdor 2004). My argument draws on both of these frames to argue that rights-oriented conservatism was fueled in an environment of racial threat (integration in the 1940s, 50s, and 60s), but became entrenched in an environment of racial isolation (whiteness of the neighborhood in the 1970s). Today, white conservatism at the

[145] Other work on context analyzes social networks (Eulau and Rothenberg 1986, Zuckerman 2005), partisan contexts (Ceaser 2013 and DiSalvo 2006) and economic contexts (Gay 2006, Books and Prysby 1999, Oliver 1999, Oliver and Mendelberg 2000)

individual level is associated with homogeneity *not* diversity in neighborhoods. The whiteness of a neighborhood could produce individual-level conservatism through two different mechanisms: the nonrandom migration of individuals into or out of whiter neighborhoods (i.e. sorting/selection), or by directly affecting the ideology of residents (i.e. treatment). The sorting mechanism is supported by research demonstrating the existence of white flight (Boustan 2010, Nall 2015) and work that offers evidence of residential choice based on differing preferences for integration and other community features (Mummolo and Nall 2016, Cho, Gimpel and Hui 2013, Bishop and Cushing 2008, Card, Mas, and Rothstein 2008, Charles 2006). A treatment effect is consistent with work showing that particular types of places generate distinctive preferences as a result of features like population density or community size (Rodden 2011, Gainsborough 2001, Ogorzalek 2017, Oliver 2001).

Treatment is also consistent with work revealing differences across places that magnify the individual attributes of inhabitants – such as when minority neighborhoods lack elite networks (Wilson 1987, Widestrom 2015). A treatment effect is further predicted by scholarship that finds that neighborhood homogeneity breeds racial hostility and intolerance due to a lack of exposure to or contact with neighbors of different backgrounds (Oliver and Mendelberg 2000, Oliver and Wong 2003). Finally, a treatment effect is indicated by scholarship demonstrating what Acharya, Blackwell, and Sen (2016) refer to as the "historical persistence of political attitudes" (p2). Patterns of race relations developed during early periods of American history generated opinions and behaviors among whites in particular places that were transmitted over time and remain detectable in modern politics (see also Hersh and Nall 2016). My argument is similar: battles over integration that occurred mid-century imbued defended neighborhoods with distinctive political attitudes that are communicated through processes like neighborhood social

interaction (Huckfeldt and Sprague 1995) and/or "low-intensity cues" - the casual observation of ones' neighbors (Cho and Rudolph 2008).

Very likely, both selection and treatment processes are at work here. Some residents of defended white neighborhoods brought their conservatism with them; others adopted it after arriving. Today, defended neighborhoods are also likely to continue to attract movers with conservative preferences. Without detailed panel survey data, I cannot discern which is the more powerful factor. What I am able to demonstrate is that neighborhood traits from the 1970s predict conservatism at aggregate and individual levels above and beyond the mobility of the population and the demographic makeup of the neighborhood today.

Conservatism and Race

Just as it is not novel to propose that neighborhoods affect political behavior, it is also not novel to propose that modern conservatism and Republican voting are rooted in racial conflict (see Hutchings and Valentino 2004 for a thorough review). Indeed, it is uncontroversial to state that the Civil Rights movement was a catalyst for partisan realignment, as Southern Democrats abandoned the party championing the rights of Black Americans (Frymer 1999, Carmine and Stimson 1989, Miller and Shanks 1996).

Since the 1970s, scholars have argued that white public opinion shifted mid-century, from a willingness to endorse Jim Crow style race prejudice/biological racism to subtler/symbolic expressions of racial resentment (see for example, Sears and Kinder 1971, Kinder and Sears 1981, McConahay 1982, Sears 1988, Kinder and Sanders 1996, Sears et al. 1997, Bobo 1983, Bobo, Kluegel, and Smith 1997, Schuman et al. 1997).

Additionally, a sophisticated literature on public opinion and political behavior reveals that racial attitudes are strongly predictive of views toward redistributive spending (Bobo and Kluegel 1997, Sears 1988, Kinder and Sanders 1996, Rabinowitz et al. 2009, Federico 2005, Gilens 1999, Quadagno 1994, Luttmer 2001) and government policies that have become racially coded (Winter 2006, Valentino, Hutchings, and White 2002, Mendelberg 2001, Hurwitz and Peffley 1997). If an individual holds negative stereotypes of racial minorities, he or she is likely to oppose expenditures on functions like welfare, and even all government spending in some settings (Sears and Citrin 1982).

What I add to these debates is not a link between racial politics, public opinion, ideology, and party identification, but a new perspective on location. The marriage between rights-based conservatism and white perspectives on race was amplified in the crucible of *city* politics throughout the postwar period not just at the state and national levels. And neighborhood defense appears to have played a causal role in the development of a host of conservative political opinions that appear to be "nonracial" (Hutchings and Valentino 2004, p6).

Empirical Evidence

I've argued that local battles over integration of public spaces in the postwar period led some whites to pursue exclusively white neighborhoods. To generate government support for segregation, neighborhood defenders turned to a set of conservative arguments that highlighted their meritocratic success. Because the Republican Party protected defenders' rights to choose their neighbors, it won their allegiance. If my argument is correct, we should find 1) that integration pressures are related to a higher incidence of exclusively white neighborhoods and 2) that residents of homogeneous white neighborhoods are more conservative and more Republican.

Testing these claims requires that I measure the presence of exclusively white neighborhoods (as the dependent variable in the first hypothesis, and as the independent variable in the second). To do this, I constructed a dataset using a proprietary product developed by GeoLytics called the Neighborhood Change Database (NCDB). The NCDB matches and normalizes census tracts between 1970 and 2000, allowing for a direct comparison of neighborhoods over time. To this, I add census tract data from the 2011 American Community Survey, matched to 2000 boundaries. I refer to neighborhoods that have a greater share of white residents than the metropolitan area as a whole as white defended neighborhoods; conversely, neighborhoods that have a greater share of residents of color than the metro area are called minority dominated neighborhoods. I use this relative conception because many residents are constrained to a particular metropolitan area by preferences or needs (Mummolo and Nall 2016), but the choice of neighborhood within that metro area may be more flexible. I capture this dynamic by measuring the demographic makeup of neighborhoods *compared to* the demographic makeup of their larger metropolitan area. This variable is the *Tract-Metro Difference in Percent White Residents.*[146] Neighborhoods that are whiter than the metro area as a whole have a positive value and those that have more people of color take on a negative value. In 1970, the average neighborhood was only very slightly whiter than the metro area (Mean= 0.018), but the distribution has a long left tail, indicating many neighborhoods that were overwhelmingly populated by people of color; by 2011, the distribution was more normally distributed, with a mean just slightly less than zero. This difference in distributions reflects the diversification of the nation and the well-documented finding that neighborhood level segregation between whites

[146] The census did not tabulate whites separately from Hispanics in 1970, but did in 1980, 1990, 2000, and 2011. Where possible I use non-Hispanic whites

and people of color has declined substantially since the 1970s (Vigdor and Glaeser 2012, Frey 2014).

In order to determine the effect that pressures for integration had on neighborhood demographics, I take advantage of a dataset compiled by Nathaniel Baum-Snow and Byron Lutz (2011) that records the timing of federal court orders for desegregation of public schools in central cities.[147] Although *Brown v Board of Education of Topeka* determined the unconstitutionality of segregated schools, a specific court order was nearly always required for large, central city districts to pursue desegregation plans. The data include court orders implemented between 1960 and 1990 for 92 central school districts in metropolitan statistical areas. Of these 92 orders, 48 are in the South, 9 are in the Northeast, 20 are in the Midwest, and 15 are in the West.

My examination does not include metropolitan areas that never faced a desegregation order. The factors that led some metro areas to receive court-ordered school desegregation plans and others not to receive such plans are most certainly not random, and are likely related to the outcome of interest here (the presence of white defended and minority dominated neighborhoods). Inclusion of the districts with no court order would thus be likely to violate the identifying assumption on the desegregation parameter. However, for those central cities in metropolitan areas that *did* receive an order, the timing of that order is plausibly exogenous to unobserved time-varying factors *within* metropolitan areas that might affect segregation due to the vagaries of the judicial process. The precise date at which court orders took effect was

[147] The data are described completely in the statistical appendix to Baum-Snow and Lutz (2011)'s paper. The appendix is available at: https://www.aeaweb.org/aer/data/dec2011/20080918_app.pdf

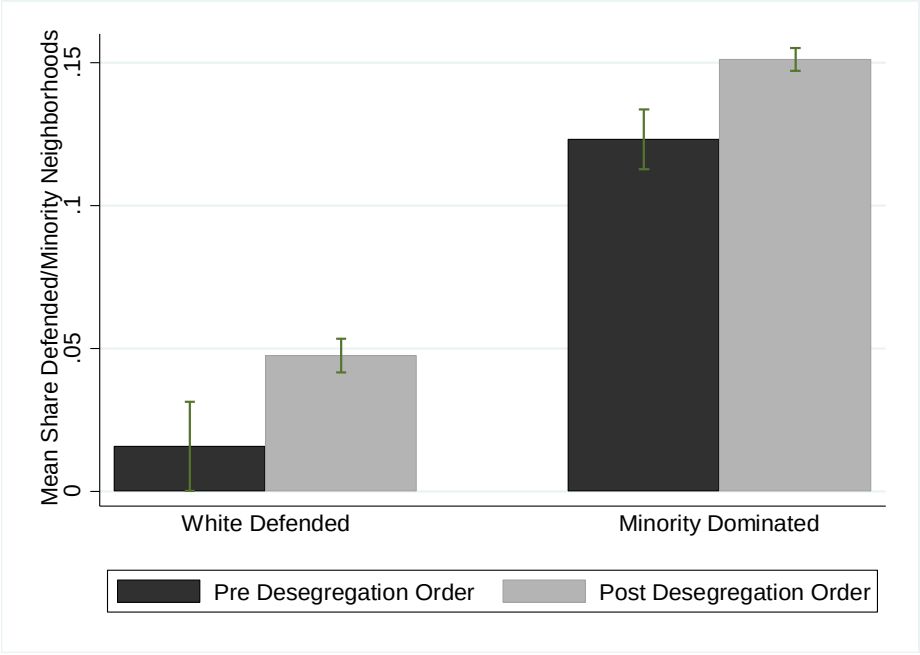
related to differences in the length of the appeals process for otherwise similar metropolitan areas (Baum-Snow and Lutz 2011).

Including Metropolitan Statistical Area (MSA) fixed effects ensures that the analysis compares the presence of defended/minority neighborhoods before and after the implementation of the court order in each metro area, while accounting for variation across MSAs. For each metropolitan area, in each of four census years (1970, 1980, 1990, and 2000), I calculated the mean *Tract-Metro Difference in Percent White* and the standard deviation of this measure. I then generated a count of census tracts that were either greater than or less than one standard deviation away from the mean racial difference for each census year in each MSA. These counts form the numerator for the share of all neighborhoods that are *White Defended* or *Minority Dominated*. These shares serve as dependent variables in my analyses. The key independent variable in my analysis, *Desegregation Order*, is a dummy indicator coded from the Baum-Snow and Lutz (2011) data noting whether or not a desegregation order was in place in the MSA's central city for a given census year. The analysis compares the number of defended/minority neighborhoods before and after the implementation of desegregation by the federal government in each MSA.[148] As controls, I add the log of the *Total Population* in the MSA, the share of MSA households *Renting* their homes, the *Wealthy* share of households (households with incomes above the 90th percentile), and the population *Density* of the MSA. While it is unlikely that these factors are related to desegregation order timing, directly, it is possible that they reflect an underlying time trend that influenced implementation as well as the propensity for

[148] Of the 92 metro areas in the dataset, 64 had orders implemented between 1970 and 1990. Because tract-level data was not available for most areas in 1960, I am unable to estimate change for 28 metro areas. These MSAs are still included in the regressions – just with no change on the desegregation order variable.

segregation. Figure 7.1 displays the marginal effects of desegregation orders, holding the control variables at their mean values.

Figure 7.1: Federal Desegregation Orders Increase Residential Segregation



The figure shows that desegregation orders significantly increased the share of neighborhoods that were both white defended and minority dominated. On average, desegregation orders generated about 30 new homogeneous neighborhoods in metropolitan areas. Homogeneity was achieved when **whites** moved within cities to new neighborhoods and to the suburbs.[149] Approximately two-thirds of the exclusive white neighborhoods in this dataset

[149] Baum-Snow and Lutz (2011) provide evidence that Black families responded to desegregation orders by moving into newly integrated central school districts suggesting that changes in homogeneity of neighborhoods would have been driven by white not black movers.

are located in suburban places and about three-fourths of the homogeneous neighborhoods of color are located in central cities.

Did these homogeneous neighborhoods produce identifiably different politics? In short, yes. To provide evidence of this claim, I measure the homogeneity of neighborhoods continuously for a single year - 1970. I use 1970 because this year marked the height of residential segregation in America and the end of the post-war period of massive demographic change (Cutler, Glaeser, and Vigdor 1999). First, I analyze the effect of neighborhood homogeneity on the aggregate 2008 presidential vote. Then, I turn to individual-level data. I find that homogeneity in 1970 predicts conservatism today.

My first dependent variable is the 2008 *Democratic Share* of the two-party presidential vote aggregated to the census tract level for the 49 states that collect vote data by precinct.[150] Precinct-level vote returns are available from the Harvard Elections Database Archive.[151] Using ArcGIS, I combined the precinct vote data with 2000 census tract boundaries available from the National Historic Geographic Information System archive.[152] I aggregated precinct-level votes to the census tract level.

My independent variable is the *Tract-Metro Difference in Percent White, 1970*. This measure captures the difference between the tract-level share of residents who were white and the metro area-level share of residents who were white in 1970. I control for the 2000 tract-level *Percent White*, the share of the tract that *Rents* their home, and the share of the tract's households

150 Oregon conducts all elections by mail, so geographically allocated votes are not available.
151 A combined, projected polygon shapefile was very generously provided to me by Clayton Nall.
152 Because precinct boundaries sometimes cross-tract boundaries, I calculated the land-area share of each precinct falling within each census tract. I used this geographic share as a weight on the total votes for the Democratic and Republican candidates before aggregating precinct vote totals to the tract level.

that are *Wealthy* (incomes above the 90th percentile). These variables account for the possibility that whiter tracts in 1970 are simply populated by more whites and homeowners today, and so, are more conservative only as a result of their current demographics. I also add the *Density* of the census tract (total population divided by total area) to account for Rodden's (2011) argument that the source of modern liberalism is housing density. To investigate the role of selection, I add a measure of the share of the tract's residents who lived in the same house in 1995. In a third analysis, I add fixed effects for region. In all analyses, I use ordinary least squares regression and cluster errors by MSA. Table 7.1 presents the results of these regressions. Summary statistics are shown in appendix Table A7.1.

Table 7.1: Effect of 1970 Relative Whiteness on 2008 Democratic Vote Share

	Column 1			Column 2			Column 3		
	B	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	-0.422	0.016	0.000	-0.112	0.023	0.000	-0.080	0.019	0.000
% White 2000				-0.340	0.026	0.000	-0.408	0.021	0.000
% Renters 2000				0.244	0.024	0.000	0.184	0.025	0.000
% Wealthy 2000				0.116	0.036	0.001	0.121	0.040	0.003
% Same House 1995				0.183	0.044	0.000	0.043	0.042	0.306
Density				1.356	1.164	0.245	-0.143	0.725	0.843
Midwest							0.020	0.013	0.115
South							-0.108	0.018	0.000
West							-0.073	0.020	0.000
Constant	0.631	0.013	0.000	0.628	0.044	0.000	0.816	0.040	0.000
R^2	0.207			0.584			0.643		
N	44,958			44,958			44,958		

Note: OLS regression, robust standard errors clustered by MSA presented.

A neighborhood of color in 1970 (*tract-metro difference* = -0.5), delivered about 84% of its votes to Barack Obama in 2008. A neighborhood that was white defended in 1970 (*tract-metro difference* = 0.5) offered Obama only 42% of its votes in 2008.[153] Obviously,

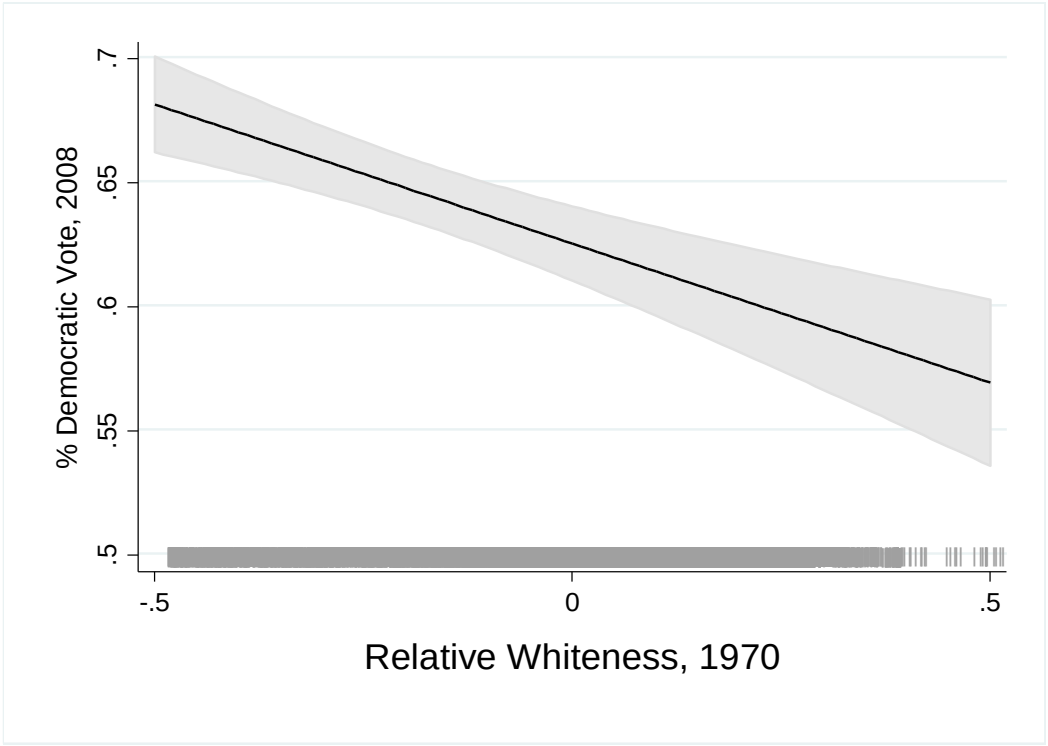
[153] Estimates generated following the regression presented in Column 1, using the margins command in Stata 14.

demographic patterns are persistent – one explanation for this outcome is that these neighborhoods that were white defended and minority dominated in 1970 are still populated with whites and people of color today. But as Column 2 shows, even accounting for contemporary demographics, neighborhoods that were relatively whiter in 1970 were about 11 percentage points less likely to support Obama relative to McCain. The difference between the least white and most white neighborhoods in 1970 is 22 percentage points – even controlling for whiteness in 2000.

Contrary to a pure selection story, census tracts with more stable populations were more (not less) likely to support Obama and there is no interaction effect between stability of the population in 1995 and the whiteness of the neighborhood in 1970. That is, if selection were entirely driving these results, we would expect that tracts that were both white in 1970 and had a large share of movers would be most likely to support the Republican candidate. This is not what we see. Holding all other variables at their mean values, Figure 7.2 presents the results from Column 2 graphically for the densest portion of the distribution on the independent variable.[154]

[154] This portion of the distribution reflects the concepts of white defended and minority dominated neighborhoods. The mean value of the 1970 tract-metro difference in percent white for minority dominated neighborhoods was -0.5 and 0.25 for defended neighborhoods.

Figure 7.2: Effect of 1970 Neighborhood Characteristics on 2008 Presidential Election Votes, Controlling for Demographics in 2000



The third column of Table 7.1 reveals that the relationship holds even when accounting for differences in mean levels of Democratic support across regions. Despite the robustness of the effect of 1970 demographics on 2008 presidential votes, it is possible that some set of uncontrolled factors affect the relative whiteness of neighborhoods in 1970 and Republican support in 2008. In an effort to determine a causal neighborhood effect, I instrument for relative whiteness in 1970 with topographical features measured at the census tract level - relative elevation of the census tract (accounting for waterfront neighborhoods) and the tract's distance from the nearest large city.

Starting perhaps with Burgess's concentric zone model of urban social structure (1925), scholars have noted that metropolitan areas often develop such that the most desirable residential neighborhoods are those that are as far as possible from the central business district, but still within commutable distance. From early on, distance from the center denoted privilege; and the historical record indicates that movement to outer lying areas was more available to whites than people of color for many decades (Jackson 1985).[155]

To measure distance from the nearest central city, I used 2010 place boundaries available from the National Historic Geographic Information System. Using data from the 2011 American Community Survey, I determined the largest population center in each metropolitan area. I converted these central cities and 2000 census tracts to centroids in ArcGIS. I measured the Euclidean distance between the closest central city and each census tract (using a near table with only one match). To generate a normal distribution, I took the natural log of this distance. The resulting measure, *Distance to Center City* (logged), is my instrumental variable.

To be useful, an instrumental variable must predict the primary independent variable, but not directly affect the dependent variable. As explained above, there is good reason to believe that a neighborhood's distance from the nearest central city positively affects the share of residents who are white in that community. There is no reason to believe that neighborhoods that are far from the city center will house Republican supporters *aside* from their demographic characteristics. However, race is not the only relevant demographic trait. Living outside of the city center also requires residents to be able to afford housing and commuting costs and

[155] That said, at no point in American history has it been the case that black central cities have been ringed by heavily populated white suburbs. This is because when suburbs WERE all white (in the 1920s), they were not heavily populated and central cities were majority white as well. By the time some central cities became majority minority, suburbs had also become more integrated. This fact is further evidence that the correct measure of residential racial context is the racial makeup of the neighborhood as compared to the metropolitan area as a whole.

obviously, race is correlated with socio-economic status. I account for this by adding the share of households in the tract that *Rents* their homes, and the share of households that are *Wealthy* as of 1970 in the first stage of the instrumental analysis.

As in the regressions presented in Table 7.1, my instrumental analysis controls for the share of the population that is white in 2000, the share of the tract that lived in the same house in 1995, and the tract's population density. My dependent variable is again the tract-level aggregate measure of the two-party *Democratic Vote Share* in 2008. I use a two stage least squares regression, with errors clustered by MSA. Table 7.2 presents the results of this estimation.

Table 7.2: Effect of 1970 Relative Whiteness on 2008 Democratic Vote Share, Instrumental Variable Analysis			
	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	-0.226	0.091	0.013
% White 2000	-0.341	0.042	0.000
% Same House 1995	-0.051	0.027	0.062
Density	5.627	1.862	0.003
Constant	0.856	0.031	0.000
FIRST STAGE			
% White 2000	0.290	0.021	0.000
% Same House 1995	-0.272	0.032	0.000
Density	5.548	0.960	0.000
Distance to City Center (logged)	0.015	0.004	0.000
% Renters 1970	-0.141	0.040	0.000
% Wealthy 1970	0.248	0.033	0.000
Constant	-0.195	0.048	0.000
R^2 (second stage)	0.544		
N	44,970		

Note: Two Stage Least Squares Regression, robust standard errors clustered by MSA presented F Test of Excluded Instruments = 50.55

The results of the instrumental variable analysis offer strong additional support for my argument that the defended/minority status of a neighborhood in 1970 continues to exert a powerful, independent, causal effect on partisanship in modern elections. The political identity of neighborhoods appears persistent. In the next section, I provide individual-level evidence of the conservatism of defended neighborhoods.

Individual Level Conservatism

Obtaining individual-level survey data that is representative of city populations is notoriously difficult (Tausanovitch and Warshaw 2014). The costs of sampling across many localities, in addition to the complexity of designing specific surveys for each community, are typically prohibitive for scholars. Instead, I take advantage of the long time series and consistent battery of questions asked by the General Social Survey (GSS). The GSS administers a survey

to an average of 2,000 respondents representing adults living in non-institutional arrangements in the United States on a biennial basis. I create a new dataset built from restricted access GSS data from the 1998, 2000, 2002, 2004, 2006, and 2008 surveys.[156] To the GSS data set, I merge tract and MSA level census data from 1970. To measure contemporary neighborhood demographics, I add linearly interpolated data from the 1990 and 2000 Census of Population and Housing and the 2007-2011 American Community Survey. For tracts not included in the American Community Survey, I use 2000 census data for all years of the GSS. The combined dataset includes tract-level data for 12,188 respondents from 117 metropolitan areas with an average of about 100 respondents per metro area.[157] Although the GSS asks an enormous range of questions each year, only a subset of the survey questions is repeated. This repetition is crucial for my ability to estimate neighborhood effects because I rely on pooling across years to gain a large enough sample size. As a result, I restrict my analyses to questions that include at least 5,000 usable responses. At this threshold, the analyses include an average of 50 responses from each MSA. For the most part, my analyses only include white respondents, as this is the relevant population for my theory.[158] I begin by determining the demographic characteristics of individuals who live in neighborhoods that were defended/segregated in 1970. In this analysis, my dependent variable is the 1970 *Tract-Metro Difference in Percent White* described above. My independent variables include several demographic traits that are known to correlate with vote choice and ideology (Miller and Shanks 1996, Carmines and Stimson 1986, Green, Palmquist and Schickler 2002): the respondent's race (a dummy variable coded 1 for *White, non-*

156 These are the years for which the GSS was able to provide census tract level information for every respondent, which is essential to my analysis. The tract-level information was provided in response to a sensitive data request submitted to the National Opinion Research Center at the University of Chicago.
157 Respondents who live outside of metro areas are excluded from these analyses.
158 It is interesting to note that the results hold for non-white respondents as well. This adds further evidence to my claim that neighborhood context is associated with political conservatism above and beyond the aggregation of residents' demographic traits.

Hispanic)[159], *Age*, *Education* (where 0 is less than high school and 4 is a graduate degree), sex (coded 1 for *Female*), the total number of *Kids* under the age of 18 living at home, marital status (coded 1 for *Married*), and inflation adjusted *Income.*[160] I also add the variable *Mover*, that is coded 1 if the respondent lived in a different city or state when she was 16 years old and 0 if she has lived in the same city.[161] To account for the hierarchical structure of the data, I estimate a multilevel mixed-effects linear regression via maximum restricted likelihood, with random effects at the MSA level. This strategy adjusts the estimates and their errors for place-based correlations in attitudes. Table 7.3 presents the results (summary statistics are shown in appendix Table A7.2).

Table 7.3: Modern Demographic Characteristics of 1970 Neighborhoods

	β	SE	P>|z|
White, non-Hispanic	0.104	0.004	0.000
Age	-0.001	0.000	0.000
Education	0.003	0.001	0.018
Female	-0.008	0.003	0.013
Kids at home	-0.003	0.002	0.082
Married	0.019	0.004	0.000
Income	0.000	0.000	0.000
Mover	0.031	0.003	0.000
Constant	-0.057	0.009	0.000
Random effects parameter	0.069	0.005	
N	10,701		
Number of MSAs	117		

Note: Mixed effects maximum likelihood regression with random effects for MSA

[159] The GSS has a relatively small sample of non-Black racial and ethnic minorities, so I combine all nonwhite racial/ethnic categories.

[160] Approximately 10% of the observations are missing income data. I imputed observations by regressing income on age, education, gender, race, work status, marital status, the number of people in the household, the size of the city, the presence of children at home, and dummy indicators for year for the non-missing observations, generating predicted values, and replacing the missing observations with the predictions.

[161] Ideally, we would like to know whether or not the respondent moved neighborhoods as well, but the GSS does not ask this question.

The estimation reveals few surprises. For example, holding all other variables at their mean values, white respondents live in neighborhoods that were whiter than the metro area in 1970 (0.06), while respondents of color live in neighborhoods that were less white (-0.04). More educated respondents live in neighborhoods that were whiter, as do married, and higher income respondents. Respondents who had moved cities or states since they were 16 chose neighborhoods that were about 4 percentage points whiter than the metro area. Respondents who live in the same city tend to live in neighborhoods that mirrored the metro area. Those with children living at home tend to live in neighborhoods that were less white in 1970, but among middle and high-income respondents this effect reverses. That is, middle and high-income families with kids at home live in significantly whiter neighborhoods.[162] A similar interactive effect occurs with age. Among the poor, older residents live in neighborhoods that were significantly less white in 1970, but among middle and high-income residents, there is no relationship between age and neighborhood characteristics. These results point to several interesting conclusions. First, the results appear to indicate that neighborhoods that were whiter than the metro area in 1970 are more expensive and more desirable. They also suggest that sorting is likely to have played a role in the development of ideology and partisanship of particular places. Finally, these results indicate that it is necessary to control for all of these individual demographic characteristics in any estimation seeking to identify neighborhood effects. I turn to this task next.

I begin with an overview of individual-level partisan affiliation and ideology. I use the 1970 *Tract-Metro Difference in Percent White* as my independent variable in all analyses. My

[162] This interactive relationship is available upon request.

first dependent variable is the respondent's *Partisan Identification*. Respondents were asked, "generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?" Follow up questions asked for the strength of partisanship and pushed independents to identify as leaners. The resulting measure is a seven-point scale running from strong Democrat to strong Republican. Next, I analyze *Ideology* (where 1 is extremely liberal and 7 is extremely conservative), and finally *Republican Presidential Vote*, coded 1 if the respondent voted for the Republican candidate in the most recent election and 0 otherwise.[163] I control for all of the demographic traits included in Table 6.3 except one – *Mover*. I omit this variable because it is missing for a large share of the total observations. Its inclusion does not affect the results presented (and the coefficient is not significant in any of the estimations). In a second set of analyses, I add controls for current neighborhood attributes to provide additional evidence that the political character of neighborhoods was developed historically. These neighborhood variables are the *Percent White* and *Percent Homeowners* in the tract, linearly interpolated for each year of the survey. Both sets of analyses are presented in Table 7.4.

[163] For this last analysis, I use a multi-level mixed effects logistic regression to account for the binary dependent variable.

Table 7.4: Effect of 1970 Neighborhood Whiteness on Modern Partisanship & Conservatism									
	Partisan Identification			**Political Ideology**			**Republican Pres. Vote**		
	β	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	1.003	0.241	0.000	0.963	0.190	0.000	1.259	0.318	0.000
Age	-0.001	0.001	0.555	0.010	0.001	0.000	0.011	0.002	0.000
Education	-0.051	0.019	0.008	-0.113	0.015	0.000	-0.005	0.022	0.831
Female	-0.310	0.043	0.000	-0.194	0.034	0.000	-0.150	0.050	0.003
Kids at home	0.107	0.025	0.000	0.080	0.020	0.000	0.140	0.028	0.000
Married	0.326	0.049	0.000	0.342	0.039	0.000	0.303	0.056	0.000
Income ($100k)	0.417	0.058	0.000	0.177	0.046	0.000	0.477	0.066	0.000
Constant	2.845	0.091	0.000	3.590	0.071	0.000	-1.446	0.112	0.000
	β	SE	P>|z|	β	SE	P>|z|	β	SE	P>|z|
Tract-Metro Difference in % White, 1970	0.899	0.254	0.000	0.898	0.197	0.000	1.131	0.332	0.001
Age	-0.002	0.001	0.168	0.009	0.001	0.000	0.010	0.002	0.000
Education	-0.045	0.019	0.018	-0.106	0.015	0.000	0.000	0.022	1.000
Female	-0.315	0.043	0.000	-0.198	0.034	0.000	-0.155	0.050	0.002
Kids at home	0.096	0.025	0.000	0.068	0.020	0.000	0.130	0.029	0.000
Married	0.298	0.049	0.000	0.317	0.039	0.000	0.276	0.056	0.000
Income ($100k)	0.355	0.059	0.000	0.118	0.047	0.012	0.420	0.068	0.000
% White Tract	-0.153	0.146	0.294	-0.232	0.113	0.040	-0.052	0.175	0.768
% Homeowners Tract	0.635	0.122	0.000	0.633	0.096	0.000	0.595	0.144	0.000
Constant	2.646	0.125	0.000	3.446	0.097	0.000	-1.703	0.153	0.000
Random effects parameter	0.130	0.026		0.052	0.012		0.247	0.046	
N	8,049			6,558			7,563		
Number of MSAs	116			116			116		

Note: Mixed effects maximum likelihood regression with random effects for MSA; white non-Hispanic respondents only

As was true in the aggregate, at the individual level, the historical persistence of neighborhoods is clear. Places that had defended their exclusive white character as of 1970 are home to significantly more Republican and conservative residents today. This is the case even when we account for both individual and aggregate demographic traits that predict partisanship and ideology.

The same pattern holds when I replace the dependent variable with particular policy items.[164] Respondents who live in neighborhoods that were whiter in 1970 are more likely to view government spending as adequate or too high on categories like social security, parks, and mass transit, and they are more likely to believe that individuals, not the government, should be responsible for health, wealth, and the standard of living.[165] For instance, respondents were asked to place themselves on a five-point scale where at one end the government should do more to solve our country's problems and at the other end the government should leave things to individuals and private businesses. Comparing whites who live in neighborhoods that were minority dominated in the 1970s to those who live in neighborhoods that were white defended moves responses in a conservative direction by about a half of a standard deviation on this scale (from an average of 2.8 to 3.3).

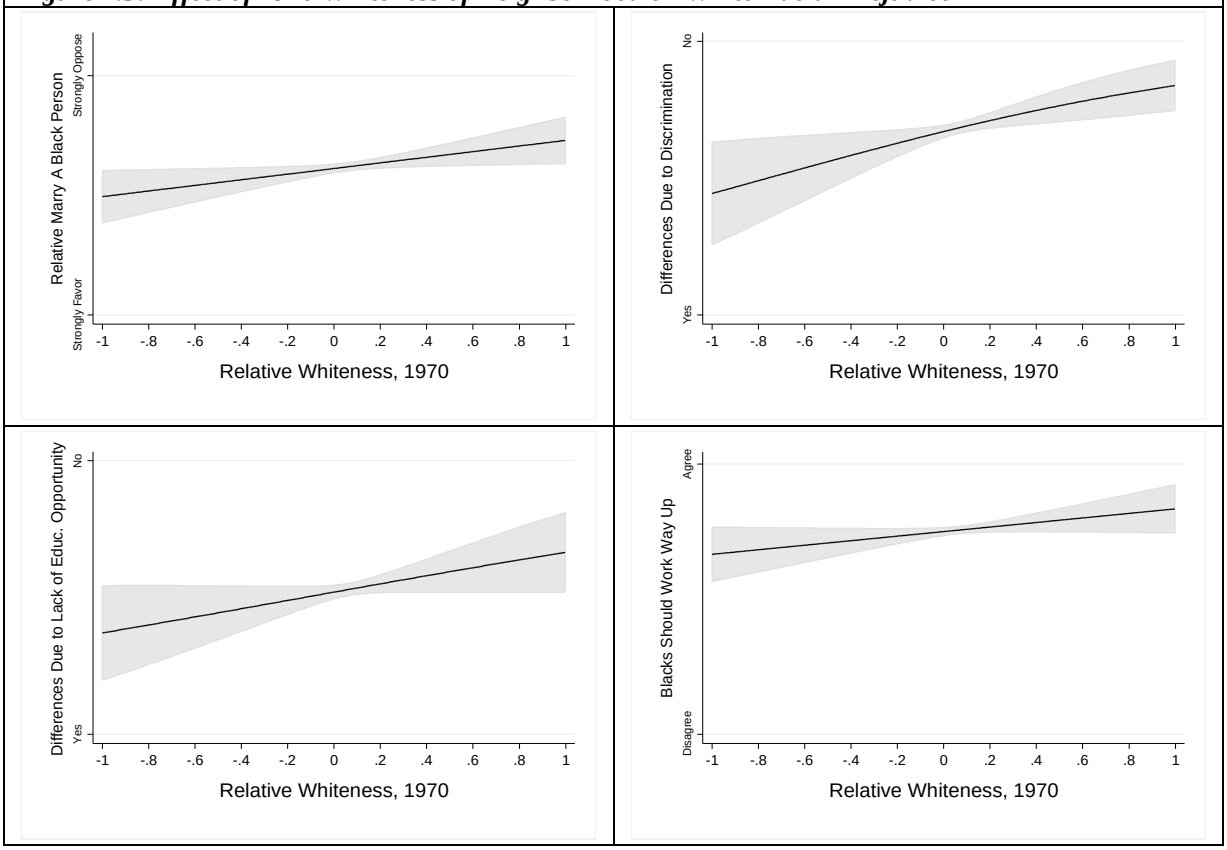
[164] These questions were not asked of all respondents in all years. As a result, in some of the specific policy areas discussed below the total number of respondents falls below 5,000. However, it never falls below 3,000.
[165] One question on which 1970 neighborhood whiteness was not associated with support for lower spending was education. When asked whether or not the government was spending the right amount "improving the nation's education system", there was no difference in the responses of individuals who live in neighborhoods that were whiter in 1970. Although this is obviously circumstantial evidence, it is plausible that the defended neighborhoods have higher quality schools and this is a feature that attracts certain residents who are supportive of higher educational expenditures.

Prejudice and Policy

If integration battles are linked to the ideology of defended neighborhoods, then we would expect residents of these places to have particularly conservative views when it comes to race. I find strong support for this contention. There are many different questions that tap racial views included in the GSS. I use several as dependent variables that are both common in the literature and have a long enough time span to generate sufficient respondents. I begin with an analysis of racial affect and prejudice. The first question asks respondents whether or not they would be in favor of having a family member marry a black person. The second question probes views on inequality. It states "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people." Then it asks: "Do you think these differences are mainly due to discrimination?" and/or "Because most (Negroes/Blacks/African-Americans) don't have the chance for education that it takes to rise out of poverty?" Finally, I analyze responses to the question, "Do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with the following statement: Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without special favors."

All dependent variables are coded so that higher values equate to a more conservative position. The structure of these analyses is the same as those included in the top panel of Table 7.4 (mixed effects maximum likelihood estimation with random effects for MSAs and controls for individual demographic characteristics). Rather than present regression tables, Figure 7.3 graphically display the marginal effects on *Tract-Metro Difference in Percent White, 1970* holding all other variables at their mean values.

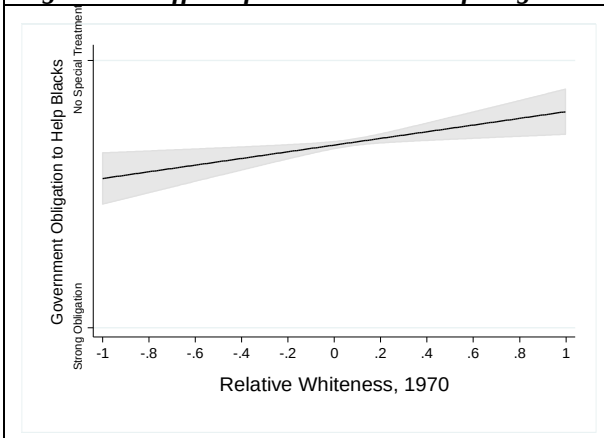
Figure 7.3: Effect of 1970 Whiteness of Neighborhood on White Racial Prejudice



The results presented in Figure 6.3 offer a consistent picture of white residents who live in neighborhoods that were whiter than the metro area in 1970. They are more strongly opposed to having a relative marry a black person, they are less likely to see persistent racial inequality in jobs, income, and housing as the result or discrimination or educational opportunities, and they are more likely to agree that blacks should have to work their way up like white ethnic groups In sum, residents of whiter neighborhoods are more likely to want to avoid close contact with blacks, to blame blacks for conditions of inequality, and put the onus on individuals to advance their position.

These attitudes translate into conservative views on race-targeted policies. To show this, I analyze two questions. The first question reads "Some people think that (Blacks/Negroes/African Americans) have been discriminated against for so long that the government has a special obligation to help improve their living standards. Others believe that the government should not be giving special treatment to (Blacks/Negroes/African Americans). Where would you place yourself on this scale?" Responses were coded on a five-point scale ranging from strong obligation to no special treatment. The second question focuses on affirmative action and asks whether or not respondents are "for or against preferential hiring and promotion of blacks." The responses are coded on a five-point scale ranging from strongly favoring to strongly opposing. Figure 7.4 presents the marginal effects of the regression of these policy responses on *Tract-Metro Difference in Percent White, 1970* holding all other variables at their mean values.

Figure 7.4: Effect of 1970 Whiteness of Neighborhood on Support for Race-Targeted Policy



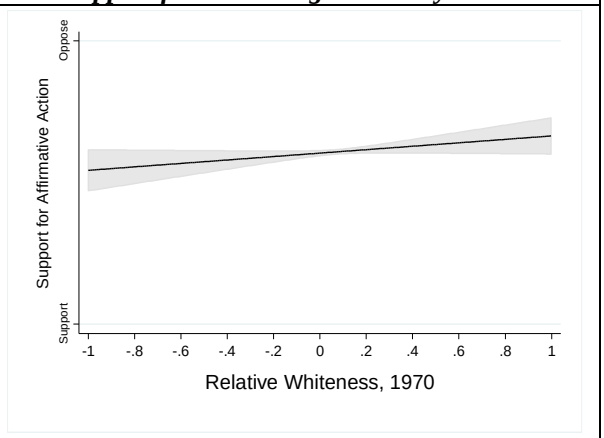


Figure 7.4 reveals that residents who live in neighborhoods that were whiter in 1970 are more likely to hold conservative views on race-targeted policy. They are less likely to feel that the

government has an obligation to make right discrimination against blacks and less likely to support affirmative action.

Conclusion

In sum, there is strong evidence that the language and ideology developed around integration battles in post-war urban America persists. During the tumultuous 1940s, 50s, and 60s, faced with changing legal and rhetorical regimes, white homeowners seeking to keep minorities out of their neighborhoods began to shed the language of racial exclusivity. They understood the defense of their homes and spaces as a defense of their rights as homeowners and freedoms as individuals. Hayward (2013) describes this as the development of an "identity story," a story about "who 'we Americans' are: about what we value, what we want and deserve, and what it is that serves our good" (p119). Hayward is clear though – the Americans included in this vision were not all Americans, but rather all *white* Americans.[166] Yet, the privileged residents of defended neighborhoods promulgated the argument that "race doesn't matter" (Hayward 2013, p176). Instead, they relied on a frame that emphasized their hard work, frugality, and investment in their children's education. This perspective persists in these places. This chapter links 1970s neighborhood demographics to feelings of distance from African Americans, a belief that racial inequality is the result of lack of individual motivation, opposition to policies that redress disparities in outcomes across racial groups, and commitment to conservatism more generally. Residents who live in defended neighborhoods today are more

[166] Hayward (2013) situates the genesis of this identity story earlier in the 20th century than I do here. She argues that it was borne of economic need among developers seeking land use planning and financial support from the government. My narrative is not incompatible with her view. It makes sense that the language adopted by rights-oriented white neighborhoods was readily available when they needed to use it. Hayward argues that the narrative of Americans as a homeowning people developed by real estate interests functioned as a "frame to many ordinary stories" (p167).

likely to identify as Republicans and more likely to vote for Republican presidential candidates.

The local roots of modern conservatism are deep.

Chapter 8: Conclusion

In the early decades of the 20th Century, homeownership rates in the United States were already much higher than in many other advanced democracies. As of 1914, in the United Kingdom 10% of households owned their homes (House of Commons Research Paper, 1999). In the United States the figure was about 45%.[167] During the late 1940s homeownership rates for France and Germany were about 31% and 27% respectively (Kohl 2014). For most families, the home was (and is) the single largest component of household wealth (Knoll et al 2014). Not only homeowners, but all property owners, land-oriented businesses (like real estate agencies), and local governments reliant on property taxes, had a strong incentive to protect and enhance the value of property. In a world of limited resources, they also had a strong incentive to politically control the distribution of public goods increasingly offered to city dwellers.

Yet, homeownership and political power were not equally available to all urban residents. In 1900, the homeownership rate among whites was more than double the rate among blacks (Collins and Margo 1999). Chinese and Japanese immigrants were barred from owning property completely in many states, and everywhere the vast majority of blacks, Asians, and Latinos were prohibited from voting (Keyssar 2000). Thus, as America became an urban nation, it was white property owners who dictated the policies of local governments. They used their power to pursue segregation. By invoking the power of land use regulation and zoning, city governments institutionalized prevailing race and class hierarchies.

In cities across the country, "Chinatowns" (McWilliams 1964, p105), Sonoratowns (Torres-Rouff 2013, p139) and "Niggertowns (Litwack 2004, p9) were walled-off by a combination of public policy, violence, and custom. Local governments then proceeded to

[167] https://www.census.gov/hhes/www/housing/census/historic/owner.html

systematically underinvest in these neighborhoods, denying them adequate sewers, paved roads, garbage collection, or public health initiatives. By the onset of the Second World War, city governments had become proficient segregators. When millions of dollars were spent renewing and rebuilding urban communities, segregation was reinforced and deepened.

By the hands of local governments the foundation of Sampson's (2012) powerful 21st century neighborhood effects, was laid. Using Chicago as a lens with which to view large, diverse cities, Sampson shows that today, neighborhoods differ significantly with respect to "crime, poverty, child health, protest, leadership networks, civic engagement, home foreclosures, teen births, altruism, mobility flows, collective efficacy, [and] immigration" (p6). These differences, Patrick Sharkey (2013) explains, are "*not* attributable primarily to factors that lie within the home or within the individual," but rather to the place itself, passed down from generation to generation (p21). Sampson (2012) argues that, as a result of racial segregation, neighborhood disadvantage is "most pronounced in the black community." These inequalities, Sampson tells us are, "durable and multiplex but not inevitable or natural" (p99).

The consequences are irrefutable. Scholars have persuasively demonstrated that segregation causes higher poverty rates for blacks and lower poverty rates for whites (Ananat 2011), lower high school and college graduation rates among blacks (Cutler and Glaeser 1997), higher imprisonment rates (Burch 2014), and higher rates of single-motherhood among blacks (Cutler and Glaeser 1997). Neighborhood disadvantage is also related to black/white income inequality, lack of employment stability among blacks, and larger gaps in cognitive skills between blacks and whites (Sharkey 2013). Cohen and Dawson (1993) show that neighborhood poverty undermines blacks' attachment to and involvement in the political system. I've shown that segregation leads to racial political polarization and underfunding of public goods.

Cumulatively, these results suggest that both growing up and living in disadvantaged places, while not wholly determining one's fate (e.g. Vance 2016), does leave little margin for error. "Mobility out of the poorest neighborhoods," Sharkey (2013) says "may be even less common than mobility out of individual poverty" (p35). Perversely, home ownership in this environment serves to limit mobility rather than enhance it.

In the first half of the 20th century, advantaged and disadvantaged neighborhoods resided within the political boundaries of large central cities. In the second half of the century, when the suburbs captured most of the population growth, the physical, and more importantly political, distance between advantage and disadvantage widened. Today, the most advantaged places are located outside of central cities altogether so that the most disadvantaged residents have no direct role to play in decisions about building affordable housing, expanding public transportation, or diversifying schools. In these places residents are more politically conservative; they vote at higher rates for Republican presidential candidates, support low taxes, want limited spending, and see inequality as the result of individual failings. Recent research suggests that privatization of public services is the most recent response to integration. Trounstine (2015) finds that a greater share of communities' security and educational needs are met through private provision in more diverse communities. Similarly, Betts and Fairlie (2003) show that native-born American families are more likely to send their children to private high school in response to increased immigration. Given this distribution of preferences and opinions, proposals to reduce inequality through mechanisms like regional governments or tax-base sharing (e.g. Orfield 2002, Katz 1999) are simply politically infeasible.

However, moving the policy debate to the state or federal level, could be more workable. Given that property owners' anxiety about protecting their investment is the driver of the many

patterns I reveal in this text, one solution would be to address this concern directly. William Fischel (2015), has argued that reducing federal tax-subsidies for owner-occupied housing would curtail homeowner demands for exclusivity.

State governments may also be able to make significant progress in generating outcomes that approach equality. There are lessons to be learned from the history of public school provision and finance. In a detailed historical analysis comparing the Charlotte and Atlanta metropolitan areas, Lassiter (2006), finds that the large geographic footprint of Charlotte's school system ensured that school integration would be successful. Conversely, Atlanta's fragmentation ensured that it failed. This indicates that states could analyze school district and municipality incorporation with an eye toward integration; limiting fragmentation and opportunities for segregation. Lafortune, Rothstein, and Schanzenbach (2015) show that recent school finance equalization policies have focused not on the gap in funding between advantaged and disadvantaged districts, but rather on ensuring a minimum adequate level of funding for all districts. They find that these reforms significantly reduce inequalities in student achievement outcomes between districts.

School finance reform has been possible because state constitutions guarantee the provision of public schooling and lawsuits (and threats of lawsuits), have forced the hand of state legislatures. Education is not the only public good guaranteed in state constitutions though. In fact, state constitutions are the locus of many positive rights. As Zackin (2013) details, they also obligate state governments to "care the poor, aged, and mentally ill, preserve the natural environment…and protect debtors' homes and dignity" (p3). Bridges (2015) demonstrates that state constitutions provide state governments substantial authority in the regulation of water provision and the protection of labor. Leonard (2010) outlines state constitutional requirements

mandating provision of health care and public health. Thus, the centralization of public goods financing, or at least the provision of a minimum level of public goods support through state governments is possible, though obviously politically contentious. At the end of the day, what is clear is that much is at stake in the local provision of public goods and the politics of segregation.

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Data Appendix

Chapter 1

Coding of Foreign Born Populations 1900-1940

The Census of Population and Housing collected detailed breakdowns regarding the origin of immigrant populations for large cities between 1900 and 1940. However, the categories of origin changed from Census to Census. I created similar categories by combining subcategories (e.g. I created a Poland variable by combining Austrian Poland, German Poland, and Russian Poland). Using the table available at: http://www.census.gov/population/www/documentation/twps0029/tab04.html, I created a category of immigrants from Southern and Eastern Europe, Asia, and Latin America. Because immigrants from Turkey in Asia were only separately categorized in some Census years, all Turkish immigrants are coded as being Southern and Eastern European, regardless of continent. The category foreign born nonwhite was created by adding the foreign born populations from countries that the 1930 Census designated as sending a majority of immigrants who were classified as nonwhite (China, Japan, India, Mexico, and West Indies).[168] To generate a measure of foreign born diversity, I calculated a Herfindahl Index:

$$Diversity = 1 - \sum_{f=1}^{F} \pi_f^2$$

where, π_f is the population share of the foreign-born group f and F is the total number of foreign-born groups (52). The following foreign born groups were listed in Censuses 1900-1940. The table presents summary statistics for all 291 cities included in these data.

Country of Origin	Mean	Std. Dev.	Min	Max
Africa	0.01%	0.04%	0.00%	1.20%
Albania	0.00%	0.03%	0.00%	0.86%
Armenia	0.14%	0.56%	0.00%	13.11%
Atlantic islands	0.07%	0.82%	0.00%	22.96%
Australia	0.04%	0.11%	0.00%	1.27%
Austria	3.57%	4.23%	0.00%	52.56%
Azores	0.09%	1.02%	0.00%	18.64%
Belgium Luxemburg	0.48%	1.78%	0.00%	25.12%
Bohemia	0.11%	1.24%	0.00%	48.24%
Born at sea	0.00%	0.01%	0.00%	0.21%
Canada newfound	10.15%	12.52%	0.00%	86.47%
Central South America	0.15%	0.34%	0.00%	5.57%
China	0.34%	1.20%	0.00%	39.04%
Cuba West Indies	0.14%	1.23%	0.00%	43.85%
Czechoslovakia	1.41%	3.69%	0.00%	49.42%
Denmark	1.22%	2.67%	0.00%	29.90%
England	8.04%	4.65%	0.28%	40.52%

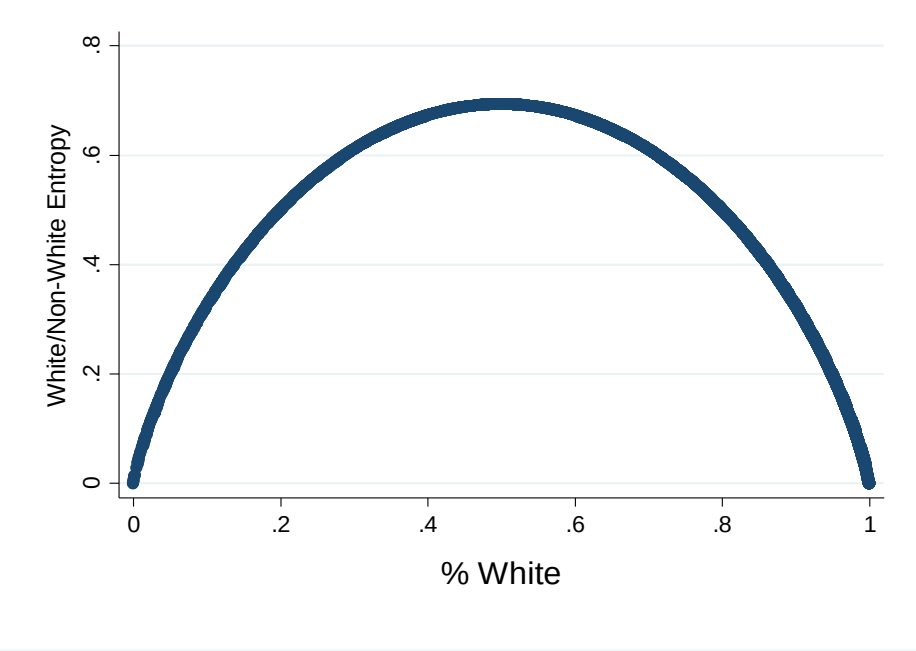
[168] Census of Population and Housing, 1930, Volume II, Chapter 5, "Country of Birth of the Foreign Born," page 231

Estonia	0.00%	0.00%	0.00%	0.02%
Europe, other	0.06%	0.14%	0.00%	3.17%
Finland	0.46%	1.70%	0.00%	21.42%
France	1.21%	1.25%	0.00%	14.62%
Germany	16.92%	14.66%	0.24%	89.81%
Greece	2.07%	2.58%	0.00%	23.83%
Holland	0.07%	1.09%	0.00%	46.72%
Hungary	2.44%	4.66%	0.00%	48.04%
Iceland	0.00%	0.00%	0.00%	0.08%
India	0.01%	0.02%	0.00%	0.47%
Ireland	9.71%	7.63%	0.03%	50.94%
Italy	9.47%	9.14%	0.00%	53.39%
Japan	0.24%	1.10%	0.00%	32.07%
Latvia	0.03%	0.16%	0.00%	2.76%
Lithuania	0.67%	1.48%	0.00%	12.26%
Mexico	1.48%	6.60%	0.00%	91.42%
Netherlands	0.86%	3.92%	0.00%	50.24%
Norway	1.49%	3.43%	0.00%	27.95%
Not specified	0.00%	0.02%	0.00%	0.57%
Other	0.99%	1.71%	0.00%	18.01%
Other Asia	0.09%	0.19%	0.00%	3.08%
Pacific Islands	0.01%	0.03%	0.00%	1.71%
Palestine Syria	0.32%	1.03%	0.00%	16.14%
Poland	6.81%	7.54%	0.00%	78.19%
Portugal	0.46%	1.88%	0.00%	18.82%
Russia	8.40%	7.06%	0.00%	71.83%
Scotland	2.62%	2.02%	0.05%	44.49%
Spain	0.29%	1.52%	0.00%	24.06%
Sweden	4.11%	7.00%	0.00%	71.64%
Switzerland	0.96%	1.09%	0.00%	9.27%
Syria	0.31%	0.92%	0.00%	15.72%
Turkey Bulgaria Romania	0.66%	1.09%	0.00%	16.93%
Wales	0.71%	1.60%	0.00%	26.78%
West Indies	0.28%	2.08%	0.00%	71.70%
Yugoslavia	0.72%	1.98%	0.00%	23.65%

A1.1: Summary Statistics Historical City Expenditures

Variable	N	Mean	Std. Dev.	Min	Max
Expenditures Per Capita (logged)	1,397	6.165	0.512	4.075	8.936
Density	1,397	11.993	8.870	0.747	79.009
Population (logged)	1,397	11.401	0.944	9.333	15.792
% Nonwhite	1,116	0.107	0.128	-0.031	0.558
% Homeowners	1,111	0.377	0.100	0.100	0.697
Foreign born diversity	1,057	0.834	0.089	0.233	0.938
Assessed Value (millions)	1,397	2.442	10.024	0.005	199.837
% Professionals	1,084	0.083	0.031	0.016	0.257

Figure A1.1: Relationship between City Level Entropy and % White



Chapter 2

Table A2.1: Summary Statistics Zoning Ordinances

Variable	Obs	Mean	Std. Dev	Min	Max
Zoning Ordinance	4,293	0.032	0.175	0.000	1.000
Expenditure $ Per Capita (logged)	4,293	3.346	0.413	1.305	6.165
Property Taxes $ Per Capita	4,293	19.798	8.045	1.794	66.837
Presidential turnout	4,293	0.514	0.177	0.013	0.991
Republican Vote Share	4,293	0.471	0.171	0.000	0.838
Midwest	4,293	0.314	0.464	0.000	1.000
North	4,293	0.422	0.494	0.000	1.000
South	4,293	0.195	0.396	0.000	1.000
West	4,293	0.070	0.255	0.000	1.000
% For. Born White	3,740	0.182	0.116	0.006	0.603
% For. Born Non White	3,740	0.005	0.024	0.000	0.398
% Black	3,654	0.081	0.125	0.000	0.557
Highways $ Per Capita	4,265	2.379	1.027	0.230	8.014
Health $ Per Capita	4,288	0.411	0.328	0.015	3.525
Fire $ Per Capita	4,293	2.148	0.815	0.364	10.945
Density	4,283	11.732	8.414	0.747	79.009
% Renters	3,577	0.628	0.101	0.303	0.903
% Employed in Manufacturing	3,554	0.533	0.137	0.109	0.838
% Employed in Agriculture	3,554	0.017	0.043	0.002	0.767
10 year population growth rate	3,592	0.327	0.410	-0.867	5.397
School segregation	4,293	0.223	0.412	0.000	1.000
% Unemployed	3,554	0.635	0.064	0.000	0.820

Chapter 3

Table A3.1: Summary Statistics Sewer Extensions, Historical Urban Ecological Dataset

Variable	Obs	Mean	Std. Dev	Min	Max
New Segments Since Last Census	541	37.20	138.45	0.00	1476.00
Total New Segments Since Last Census	541	1237.02	1953.43	0.00	5933.00
Total Segments in Ward	541	857.72	952.77	181.00	8375.00
% Segments Built	541	0.64	0.25	0.00	0.96
% Foreign Born	541	0.25	0.12	0.01	0.64
% Renters	271	0.74	0.13	0.34	0.98
Renter Segregation	541	0.09	0.03	0.04	0.14
% Black	541	0.08	0.14	0.00	0.95
Racial Segregation	541	0.47	0.16	0.29	0.86

Table A3.2: Summary Statistics: Public Sewer Connections

Variable	Obs	Mean	Std. Dev	Min	Max
% Public Sewer in Tract	146,102	0.773	0.328	0.000	1.000
% Nonwhite	146,102	0.203	0.280	0.000	1.000
Racial Segregation	146,102	0.216	0.197	0.000	0.915
% Renters	146,102	0.356	0.238	0.000	1.000
Renter Segregation	146,102	0.115	0.086	0.000	0.786
% Wealthy	146,102	0.183	0.155	0.000	1.000
City Population	146,102	392911	686109	59	3480384
City Public Sewer Connections	146,102	139100	261531	0.000	1269144
Midwest	146,102	0.234	0.423	0.000	1.000
South	146,102	0.307	0.461	0.000	1.000
West	146,102	0.229	0.421	0.000	1.000

Chapter 4

Table A4.1: Summary Statistics: Urban Renewal Applications and Disbursement

Variable	Obs	Mean	Std. Dev.	Min	Max
Racial Segregation, 1980	172	0.299	0.158	0.015	0.671
Renter Segregation, 1980	172	0.139	0.053	0.014	0.284
Urban Renewal Funds Approved, $100 million	173	0.466	0.734	0.000	5.481
Urban Renewal Funds Disbursed, $100 million	173	0.315	0.536	0.000	4.165
Segregation, 1950	173	0.398	0.153	0.095	0.908
% Owner occupied, 1950	173	47.127	11.692	12.400	70.700
Median Home Value, 1950 (log)	173	9.0	0.3	8.4	9.9
% Dilapidated, 1950	172	6.7	4.9	0.5	26.1
% Built Pre-1920, 1950	172	56.8	17.6	6.1	94.6
% Units w/o Plumbing, 1950	172	22.4	12.5	2.8	62.4
Population (millions), 1950	173	277794.0	702673.5	38946.0	7891957.0
% Nonwhite, 1950	173	11.7	11.9	0.1	44.0
% Employed Manufacturing, 1950	173	31.2	13.7	6.6	64.9
% Employed, 1950	173	94.6	1.9	88.3	98.0
Median Education, 1950	173	10.1	1.2	7.9	12.7
Family Income, 1950 (log)	173	8.1	0.1	7.6	8.6
% Incomes Below $2000, 1950	173	21.4	7.5	10.0	48.8
% Housing Operations	170	0.017	0.020	0.000	0.115
Public Housing Units Per Capita	173	1104.9	802.8	0.0	3819.0

Table A4.2 Summary Statistics Open Housing Initiative Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Opposed to Fair Housing	4,860	0.630	0.483	0	1
Democratic Presidential Voter	4,860	0.591	0.492	0	1
Home Owner	4,860	0.712	0.453	0	1
Education Level	4,860	3.305	1.365	1	6
Age	4,860	3.021	1.535	1	6
Economic Level	4,860	5.007	1.755	1	10
White	4,860	0.933	0.250	0	1
Union Member	4,860	0.305	0.461	0	1

Chapter 5

Table A5.1: Summary Statistics Segregation Across Cities

Variable	Obs	Mean	Std. Dev.	Min	Max
Across-City Share of Racial Segregation	618	0.4080	0.1799	0.0000	0.8793
Across-City Share of Renter Segregation	618	0.3501	0.1481	0.0000	0.8021
Across-City Share of Wealthy Segregation	618	0.2909	0.1737	0.0000	0.7650
Minority Mayor	618	0.2751	0.4469	0.0000	1.0000
Direct General Expenditure Per Capita	618	1.3443	0.9529	0.3131	9.9550
% Spent on Policing	618	0.1408	0.0511	0.0393	0.3244
Crime Rate	618	0.0917	0.0426	0.0000	0.4194
Population (logged)	618	12.0515	0.9916	9.8635	15.1231

Chapter 6

Table A6.1: Summary Statistics Racial Polarization Data

Variable	Obs	Mean	Std. Dev.	Min	Max
Largest Racial Divide	91	0.481	0.213	0.016	0.934
H Index – multi-group	91	0.376	0.119	0.183	0.635
H Index – two-group	91	0.353	0.114	0.156	0.614
Diversity	91	0.623	0.088	0.323	0.736
% Asian	91	0.067	0.074	0.008	0.318
% Black	91	0.275	0.181	0.030	0.815
% Latino	91	0.229	0.155	0.009	0.605
Median HH Income	91	36725	10114	17268	75982
% Renters	91	0.535	0.092	0.368	0.718
% College Ed	91	0.167	0.056	0.049	0.359
Biracial contest	91	0.725	0.449	0	1
Nonpartisan Election	91	0.714	0.454	0	1
Primary Election	91	0.352	0.480	0	1
Population (logged)	91	14.166	0.826	13.065	15.921
White Ideology	86	3.835	0.648	2.667	5.250

Table A6.2: Cities included in Racial Polarization Data

	Segregation		Largest Racial Divide, Number of Elections		
City Name	Mean H Index Multi-Group	Mean H Index Two-Group	Black/White	Latino/White	Black/Latino
Austin, TX	0.204	0.208	1		
Baltimore, MD	0.510	0.516	3	1	
Charlotte, NC	0.269	0.287	2		
Chicago, IL	0.572	0.460	7		1
Cleveland, OH	0.558	0.531	2		
Columbus, OH	0.316	0.284	3		1
Dallas, TX	0.359	0.339	4		1
Denver, CO	0.289	0.254	1	2	
Detroit, MI	0.398	0.255	1		1
Houston, TX	0.339	0.308	7		2
Indianapolis, IN	0.292	0.293			1
Jacksonville, FL	0.233	0.222	2		
Los Angeles, CA	0.351	0.366	3		5
Memphis, TN	0.470	0.474	2		
Milwaukee, WI	0.423	0.360	3		
New York, NY	0.468	0.474	5	3	1
Oklahoma, OK	0.231	0.165	1		
Philadelphia, PA	0.492	0.487	5		
Phoenix, AZ	0.255	0.270		1	
San Antonio, TX	0.237	0.225		4	
San Diego, CA	0.255	0.266	3		1
San Francisco, CA	0.223	0.161	3		1
San Jose, CA	0.186	0.198		2	1
Tucson, AZ	0.185	0.192	1		
Washington, DC	0.464	0.491	3		

Table A6.3: Summary Statistics Census of Government Finance and Population

Variable	Obs	Mean	SD	Min	Max
Direct General Expend per cap	16,831	1.332	1.304	0.022	78.010
Highways per cap	16,642	0.090	0.060	0.000	1.225
Parks per cap	16,673	0.209	0.109	0.000	1.746
Police per cap	15,809	0.069	0.073	0.000	2.564
Sewers per cap	13,832	0.106	0.089	0.000	1.762
Welfare, Health & Housing per cap	13,203	0.066	0.156	0.000	6.321
Own Source Revenue per cap	16,830	1.065	1.174	0.020	84.284
Two-Group H Index	16,831	0.074	0.094	0.000	0.767
Diversity	16,831	0.321	0.190	0.005	0.778
% Black	16,831	0.099	0.153	0.000	0.980
% Asian	16,831	0.034	0.057	0.000	0.674
% Latino	16,831	0.111	0.165	0.000	0.987
5 yr Δ % Black	14,284	0.007	0.019	-0.101	0.229
5 yr Δ % Latino	14,284	0.016	0.020	-0.171	0.207
5 yr Δ % Asian	14,284	0.005	0.011	-0.056	0.128
Median income	16,831	60112	24654	17320	266887
% Local Gov Employees	16,831	3.364	0.992	0.302	11.606
% Renters	16,831	0.358	0.140	0.009	0.911
% Over 65	16,831	0.127	0.051	0.007	0.798
% College degree	16,831	0.167	0.103	0.003	0.618
Population (logged)	16,831	10.107	1.030	6.071	15.921
City Ideology	2,524	4.028	0.788	1.000	7.000
Population	16,831	52940	205791	433	8214426

Table A6.4: First Stage Regression of Segregation on Waterways and Population

	Direct General Expenditure		
	β	SE	P>|t|
# Waterways	0.005	0.00	0.00
Population(logged)	0.028	0.00	0.00
Lagged DV	0.000	0.00	0.00
Diversity	0.085	0.00	0.00
% Black	0.137	0.00	0.00
% Asian	-0.209	0.01	0.00
% Latino	0.001	0.00	0.69
Median Income (1000s)	0.000	0.00	0.00
% Local Gov. Employees	-0.001	0.00	0.01
% Renters	0.011	0.00	0.00
% Over 65	0.255	0.01	0.00
% College Grad	-0.003	0.01	0.66
Constant	-0.271	0.00	0.00
N	25,669		

Note: First stage of two stage least squares regressions with fixed effects for regions and year (not shown); Instrumented: Two-group H Index of segregation; Excluded Instruments: # of Waterways, Population logged

Table A6.5: Summary Statistics Sewer Overflows, EPA

Variable	Obs	Mean	SD	Min	Max
Logged Overflows per capita	1,417	0.508	1.353	0.000	25.548
Racial Segregation	1,417	0.028	0.060	0.000	0.559
Population (logged)	1,417	8.414	1.701	3.091	15.122
% Renters	1,417	0.324	0.124	0.000	0.796
% Urban	1,417	0.609	0.467	0.000	1.000
% Black	1,417	0.086	0.164	0.000	0.978
% Asian	1,417	0.012	0.025	0.000	0.314
% Latino	1,417	0.053	0.092	0.000	0.884
Median Income (1000s)	1,417	37623	14287	13516	190805
Subventions Per Capita (1000s)	1,417	391.648	1397.263	0.000	50670.790

Chapter 7

Table A7.1 Summary Statistics: Democratic Vote Share, 2008, Harvard Elections Database Archive

Variable	Obs	Mean	Std. Dev.	Min	Max
% Democratic Vote, 2008	44,958	0.623	0.200	0.054	1.000
Tract-Metro Difference in % White, 1970	44,958	0.019	0.216	-0.939	0.553
% White 2000	44,958	0.637	0.320	0.000	1.000
% Renters 2000	44,958	0.377	0.249	0.000	1.000
% Wealthy 2000	44,958	0.167	0.159	0.000	1.000
Density	44,958	0.003	0.005	0.000	0.089
Midwest	44,958	0.241	0.427	0.000	1.000
South	44,958	0.298	0.458	0.000	1.000
West	44,958	0.226	0.418	0.000	1.000
Proportional Tract-Metro Elevation Diff.	44,956	-0.195	0.556	-1.007	19.336
Waterfront Tract	44,958	0.203	0.402	0.000	1.000
Distance to City Center (logged)	44,958	9.692	1.010	3.643	12.228

Table A7.2 Summary Statistics: Modern Partisanship and Conservatism, General Social Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Partisan Identification	11,674	2.680	1.953	0.000	6.000
Political Ideology	9,376	4.039	1.419	1.000	7.000
Republican Pres. Vote	10,804	0.334	0.472	0.000	1.000
Tract-Metro Difference in % White, 1970	11,674	0.039	0.182	-0.863	0.342
White, non-Hispanic	11,674	0.689	0.463	0.000	1.000
Ago	11,674	46	17	18	89
Education	11,674	1.624	1.213	0.000	4.000
Female	11,674	0.555	0.497	0.000	1.000
Kids at home	11,674	0.617	1.049	0.000	8.000
Married	11,674	0.457	0.498	0.000	1.000
Income	11,674	51987	42442	407	178266
Mover	10,640	0.617	0.486	0.000	1.000
% White Tract	11,674	0.649	0.296	0.000	0.994
% Homeowners Tract	11,674	0.617	0.247	0.000	0.995

ATTACHMENT TO LETTER 65

ORDINANCE NO. 1 (NCFPWIA)

AN ORDINANCE OF THE NAPA COUNTY FLOOD PROTECTION AND WATERSHED IMPROVEMENT AUTHORITY, IMPOSING A 1/2% NAPA COUNTY FLOOD PROTECTION TRANSACTIONS (SALES) AND USE TAX PURSUANT TO THE PROVISIONS OF REVENUE AND TAXATION CODE SECTION 7285.5, ESTABLISHING A NAPA FLOOD PROTECTION AND WATERSHED IMPROVEMENT EXPENDITURE PLAN, ESTABLISHING A FINANCIAL OVERSIGHT COMMITTEE AND TECHNICAL ADVISORY PANEL, REQUIRING ANY FUNDS GENERATED AS A RESULT OF THE IMPOSITION OF THE NAPA COUNTY FLOOD PROTECTION TRANSACTIONS (SALES) AND USE TAX TO BE SPENT ON THE PROJECTS IDENTIFIED IN THE EXPENDITURE PLAN, AUTHORIZING THE ISSUANCE OF BONDS OR OTHER OBLIGATIONS TO FINANCE THE PROJECTS IDENTIFIED IN THE EXPENDITURE PLAN PAYABLE FROM THE REVENUES GENERATED BY THE TRANSACTIONS (SALES) AND USE TAX AND ESTABLISHING AN APPROPRIATIONS LIMIT.

The Napa County Flood Protection and Watershed Improvement Authority (hereafter "Authority") does ordain as follows:

SECTION 1. Title

This Ordinance shall be known as the "Napa County Flood Protection Sales Tax Ordinance" (the "Ordinance") which establishes and implements a transactions and use tax (hereafter "Flood Protection Sales Tax") and establishes a Napa County Flood Protection and Watershed Improvement Expenditure Plan (hereafter "Plan") describing the specific projects for which the revenues received as a result of the imposition of the tax may be expended, all pursuant to Revenue and Taxation Code Section 7285.5. The transactions and use tax provisions of this Ordinance shall be applicable in the incorporated and unincorporated territory of the County of Napa. The County of Napa shall hereinafter be referred to as "District".

SECTION 2. Findings

The Authority finds that:

A. Since 1862, more than 27 major floods have plagued the Napa Valley, resulting in a significant loss of life and damage to property. Among the most damaging was the flood of 1986 which caused more than $140 million in damage and led to the evacuation of 7,000 residents. The 1995 flood damaged an estimated 227 businesses and residences at a cost of over $100 million.

B. In addition to these major and extremely serious floods, damage from the more common annual flooding—like the recent floods of January 1997—cost an annual average of $6 million in repairs and cleanup.

C. A Plan has been developed and is designed to protect the residents and businesses of Napa County from all floods up to and including a 100–year storm event.

D. The Plan is an integrated approach which applies to all the Napa County watersheds.

E. The Plan was developed by a unique and broad–based coalition of Napa County residents, including local community water experts, engineers, architects, environmentalists, business owners, government officials and other leaders.

F. The Plan relies on natural processes to protect Napa County residents and their properties, takes into account the Napa River's overall watershed, and envisions wetlands, open space, bypass channels, set–back levees, river widening by establishing flood plain terracing, elevation and relocation of homes and bridge replacements as its main weapons against flooding.

G. None of the projects in the Plan are intended or designed to encourage population growth in Napa County. All of the projects are for flood protection, preserving ground water integrity, reducing sediment in the Napa River system, and for maintaining the reliability of the water supply for the existing Napa County populationas of the effective date of this Ordinance.

H. The majority of the Plan will be paid for by federal money as well as state and existing local resources.

I. The ultimate goal of the Plan is to provide flood protection, save lives, protect property, restore the Napa River, Napa Creek, and other tributaries, maintain Napa County's economic vitality, and enhance riparian environments.

J. The allocation of the Flood Protection Sales Tax revenues that will be generated as a result of the passage of this 1/2% transactions and use tax by the Authority and the subsequent approval by the People with a 2/3rds vote, shall be based on the amount of Flood Protection Sales Tax revenue generated by the various geographic areas within the County, subject to Section 20 of this Ordinance.

SECTION 3. Purpose and Intent

The Authority declares that, in passing this Ordinance, it is its intent to fund a Plan which will:

A. Minimize the County's vulnerability to major floods that have plagued Napa County, resulting in a significant loss of life and substantial damage to property;

B. Manage flood waters throughout Napa County, thereby providing benefits to Napa, Calistoga, St. Helena, Yountville, American Canyon, Angwin/Deer Park, and the unincorporated County areas;

C. Provide flood protection from all floods up to and including the 100–year storm event while avoiding environmentally damaging channelization and excessive dredging, and utilizing environmentally beneficial methods such as wetlands and open space, as well as bypass channels, set–back levees and floodwalls, river widening by establishing flood plain terracing, elevation and/or relocation of homes, floodproofing of businesses, and bridge replacements;

D. Minimize flood damage, save lives, protect property, safeguard the environment, maintain the economic viability of Napa County and avoid to the greatest extent possible the need for flood insurance;

E. Provide for water reliability and wastewater treatment, using accepted watershed management practices, to maintain water quality in the Napa River;

F. Ensure ongoing community input in the finalization of all projects necessary for flood protection and water supply reliability for the existing Napa County population as of the effective date of this Ordinance.; and

G. Ensure ongoing involvement of all municipalities of Napa County in the implementation of the Plan by execution of a Joint Powers Agreement (JPA) between the Authority, Napa County, the Flood Control and Water Conservation District, and the incorporated Cities and Towns of Napa County. This agreement shall contain specific allocations and methods of distribution of the Flood Protection Sales Tax revenues based on the tax revenues generated by each of the incorporated and unincorporated areas in Napa County subject to section 20 of this Ordinance.

SECTION 4. Use of Flood Protection Sales Tax Revenues

A. The revenues generated by the Flood Protection Sales Tax shall be used to fund the projects included in the Plan. The revenues shall also be utilized to fund reasonable costs incurred in the administration of the Napa County Financial Oversight Committee and the Technical Advisory Panel which are established by this Ordinance.

B. The Napa County Auditor–Controller shall deposit all revenues received from the Flood Protection Sales Tax and all earnings thereon into the general fund of the Authority and the proceeds shall be used only for the projects identified in Sections 7 and 8 of this Ordinance, the administration costs identified in subparagraph (A) of this section, and the payment of bonds or other obligations issued to finance such projects and related financing costs.

SECTION 5. Equitable Distribution of the Flood Protection Sales Tax Revenues to County-Wide Projects

The distribution of the Flood Protection Sales Tax revenues to fund the projects described in this Ordinance, over the life of the tax, shall occur in a manner which is proportional to the Flood Protection Sales Tax revenues generated by each of the incorporated and unincorporated areas in Napa County. The portion of the distributions representing the share of the revenues allocated to the unincorporated area may be used to assist in paying for the flood protection projects involving incorporated areas that are described in this Ordinance.

Specific allocations and methods of distribution based on the amount of Flood Protection Sales Tax revenues generated by each of the incorporated and unincorporated areas in Napa County shall be specified in a Joint Powers Agreement which shall be developed following the enactment of the Flood Protection Sales Tax.

SECTION 6. Napa County Flood Protection and Watershed Improvement Expenditure Plan

The Plan involves the following two interrelated components which are described in greater detail in Sections 7 and 8 of this Ordinance:

A. The Napa River and Napa Creek Project for the City of Napa which will provide the City of Napa with flood protection from all floods up to and including a 100 year storm event; and

B. Countywide flood protection and watershed improvement projects for the communities of Calistoga, Yountville, St. Helena, Angwin/Deer Park, American Canyon, and the unincorporated areas

of Napa County.

SECTION 7. Approved Projects: City of Napa: Napa River and Napa Creek Flood Protection Project

The following component of the Plan involves the City of Napa:

The Napa River and Napa Creek Project as detailed and designed by the Community Coalition for Napa Flood Management and the Army Corps of Engineers. This project, approximately 50% of which is expected to be paid for by the Army Corps of Engineers, is designed to protect the City of Napa against all floods up to and including a 100–year storm event such as the floods of February, 1986 and January 1997. This environmentally restorative project includes the following components:

A. A dry bypass channel with a weir will be constructed to divert flood waters around the Oxbow (the extreme bend in the Napa River near First Street);
B. A tidal and floodplain terrace will be created;
C. Wetlands will be created on the east and west banks of the Napa River;
D. Toxics throughout the project area, including the Oil Company Road area, will be cleaned up and excavated to improve flood water conveyance and improve the water quality of the Napa River;
E. New bridges will be constructed so they do not act as obstructions during flooding;
F. Maintenance roads/recreation trails will be extended from Kennedy Park through downtown Napa to Trancas Street;
G. Set-back levees and floodwalls will be constructed;
H. Properties will be purchased and/or relocated if necessary to implement the Plan; and
I. Capital improvement maintenance of the project.

SECTION 8. Approved Projects: County–Wide Flood Protection and Watershed Improvement Projects Not Involving the City of Napa

The component of the Plan that involves the rest of the County must include the following projects which are designed to protect against flooding, improve water quality, preserve the integrity of ground water resources and/or stabilize water supply reliability for the existing Napa County population as of the effective date of this Ordinance. None of these projects are intended or designed to expand water capacity for growth and new development.

All of these projects shall be planned in accordance with the "Living River Guidelines" contained in the Community Coalition's Flood Management Plan and the Napa River Watershed Owners Manual of the Napa County Resource Conservation District.

The Technical Advisory Panel, which is established by Section 9(B) of this Ordinance, will be available to assist each municipality in project planning, upon request by the municipality or jurisdiction.

A. Community of Angwin/Deer Park
   1. Stabilization and enhancement of existing water reservoirs which shall be for the purpose of flood protection and water reliability; and

2. Stabilize water quality.

B. City of American Canyon
   1. Implement the adopted Flood Control and Storm Drain Master Plan to protect existing development; and
   2. Restore wetlands by replacing the existing wastewater treatment facility.

C. City of Calistoga
   1. Stabilization and enhancement of Kimball Reservoir which shall be for the purpose of flood protection and water supply reliability; and
   2. Flood protection and drainage improvements in the Grant Street area and other critical areas to protect residents and businesses from flooding.

D. City of St. Helena
   1. Flood management measures for the Napa River, Sulpher Creek, York Creek, and other tributaries to prevent flooding; and
   2. Construct urban stormwater run–off facilities at Fulton, McCorkle, Mills and other areas; and
   3. Stabilization and enhancement of Bell Canyon Reservoir, or other existing reservoirs, which shall be for the purpose of flood protection and water supply reliability.

E. Unincorporated Areas of Napa County:
   1. County unincorporated area flood damage reduction projects including elevating/relocating structures, including bridges, in the floodway and floodplain; and
   2. Agricultural watershed and stormwater runoff management improvements planned jointly by the agricultural industry, the County, the Napa County Resource Conservation District and the Department of Fish and Game, including projects which will:
      - Reduce the amount of storm runoff and sediment in the Napa River System from agricultural lands; and
      - Increase flood storage of the River system by the setback of active land uses from river and tributary banks.

F. Town of Yountville
   1. Flood protection for the Town's mobilehome parks and surrounding areas; and
   2. Hopper Creek and Beard Ditch improvements and restoration for flood protection.

In the event any project described in this Section is not economically or environmentally feasible, the legislative body having jurisdiction over the lands involved shall recommend to the Napa County Flood Control and Water Conservation District a replacement project. Only replacement projects that meet the criteria set forth in the first two paragraphs of this Section shall qualify and may be approvedprovided, however, that facilities for, or purchase of, North Bay Aqueduct or other water imported from outside Napa County shall not qualify as replacement projects. The Napa County Flood Control and Water Conservation District shall consider recommending approval of a replacement project to the Authority

only after obtaining the recommendation of the Financial Oversight Committee and the Technical Review Committee. Approval by the Authority shall be in the form of an amendment to this Ordinance. Changes meeting the above criteria, to the extent permitted by law, shall not need a vote of the People ratifying the amendment.

SECTION 9. Napa County Financial Oversight Committee and the Technical Advisory Panel

A. Financial Oversight Committee.

1. Establishment. A Napa County Financial Oversight Committee is hereby established and shall remain in existence for as long as the Flood Protection Sales Tax is in effect. The Financial Oversight Committee's purpose and charge is to inform the public regarding the expenditure of the Flood Protection Sales Tax proceeds that will be generated as a result of the approval of this Ordinance by the Authority and the electorate.

2. Responsibilities.

The Financial Oversight Committee shall be responsible for:

a. Providing the public with information regarding the manner in which the expenditure of the Flood Protection Sales Tax proceeds that will be generated as a result of the approval of this Ordinance by the Authority and the electorate has occurred;

b. Reviewing the expenditure of the Flood Protection Sales Tax proceeds that will be generated as a result of the approval of this Ordinance by the Authority and the electorate, and the proceeds received as a result of the issuance of any bonds or other obligations payable from the Flood Protection Sales Tax proceeds, and causing to be prepared an annual audit regarding the use of these proceeds;

c. Reviewing the financial impact of all projects, planned and approved, utilizing the Flood Protection Sales Tax proceeds that will be generated as a result of the approval of this Ordinance by the Authority and the electorate, and advising the public whether such projects are consistent with the purpose, spirit, intent and language of this Ordinance;

d. Informing the public if there is an expenditure of the Flood Protection Sales Taxes that will be generated as a result of the approval of this Ordinance by the Authority and the electorate which is inconsistent with the purpose and intent of this Ordinance.

e. Meet not less than once each calendar quarter, pursuant to the Ralph M. Brown Open Meeting Act and invite public participation and comment with respect to any expenditure or the implementation of any project envisioned by this Ordinance.

3. Membership.

a. The Financial Oversight Committee shall consist of the following individuals:

i. One representative recommended by each of the five Napa County City/Town Councils, and one representative recommended by the Board of Supervisors of the County of Napa. However, the representatives shall not be officers, agents, employees, or elected officials of any City in Napa County or the County;

ii. Two representatives each of whom must be recommended by the business community;

iii. One representative who must be recommended by the local media;

iv. One representative who must be recommended by the Napa County Taxpayers Association;

v. Two representatives each of whom must be recommended by the environmental community;

vi. One representative who must be recommended by the Friends of the Napa River; and

vii. Two representatives who must be recommended by the agricultural industry; and

viii. A certified public accountant, whose practice includes auditing public agencies, but who is

not currently acting as an independent auditor in the case of any incorporated area within the County of Napa or the County of Napa, who must be recommended by the representatives and appointees identified in subparagraphs (i) through (vii).

b. All representatives shall be appointed by the Board of Supervisors. However, no appointments shall be made by the Board of Supervisors other than from the recommended list of the public agencies or organizations identified in subdivision (A)(3)(a) above.

c. In addition to the sixteen members described above, the Financial Oversight Committee may recommend to the Board of Supervisors that it appoint up to two additional members if in the opinion of the Committee additional representation of individuals and groups located in Napa County is necessary.

d. No member of the Committee shall receive any salary or compensation for serving on the Committee. However, the Committee may, in the case of the Certified Public Accountant, upon the unanimous vote of the other members of the Committee, compensate said individual in an amount not to exceed the rate of compensation commonly charged by Certified Public Accountants in the City of Napa.

e. All members of the Committee, except for the Certified Public Accountant, shall be individuals who live in the incorporated or unincorporated areas of Napa County. The panel shall have resources sufficient to carry out their duties.

B. Technical Advisory Panel

1. Establishment. A Technical Advisory Panel is established and shall remain in existence for as long as the Flood Protection Sales Tax is in effect.

2. Membership. The Napa County Flood Control and Water Conservation District Board of Directors shall appoint the Technical Advisory Panel whose purpose and charge is to provide technical expertise in reviewing the Corps of Engineers proposed project which is located within the City of Napa to ensure consistency with the Community Coalition Project Plan. The Panel shall consist of no more than nine members. Members of the Panel shall have expertise in one or more of the following disciplines: (1) architecture, (2) landscape architecture, (3) civil engineering, (4) hydrology/hydraulics, (5) urban planning or design, (6) water and wastewater engineering (7) geotechnical engineering and/or (8) environmental sciences/natural resource management. All members shall demonstrate a thorough knowledge of and commitment to the "Living River Guidelines" and the "Urban Design Criteria" of the Community Coalition Flood Management Plan and the watershed management guidelines contained in the Napa River Watershed Owner's Manual of the Napa County Resource Conservation District, as well as sound engineering flood protection principles.

3. The Panel may provide technical expertise to review and comment on the planning of other Countywide projects.

4. The Panel is advisory to the Napa County Flood Control and Water Conservation District.

5. The Napa County Flood Control and Water Conservation District Board of Directors shall appoint the Panel to ensure its ongoing input and recommendations regarding the following Army Corps of Engineers documents prior to executing same:

a. The General Design Memorandum and related Environmental Impact Statement (EIS);

b. The Project Cooperation Agreement;

c. All preliminary plans and construction contracts, final plans and specifications related to the City of Napa Corps of Engineers project.

6. All members of the Panel shall be individuals whose domicile is in Napa County.

7. The panel shall have resources sufficient to ensure continuous onsite review of Army Corps of Engineers construction activities.

SECTION 10. Expiration of Tax; Extension of Tax.

A. The transactions and use tax imposed by this Ordinance shall expire June 30, 2018; provided, that if the Authority shall not have contracted with the State Board of Equalization on or before July 1, 1998, and as a result the operative date is the beginning of a calendar quarter subsequent to July 1, 1998, the expiration date shall be extended, for a period of time equal to the delay. Notwithstanding the preceding sentence, this tax may be extended beyond the twenty–year period if the question of extending the tax is placed on the ballot and approved by the legally required percentage of qualified voters voting on the extension.

B. This transactions and use tax may be reduced or rescinded by a majority vote of the Governing Board of the Authority; provided, however that such modification or rescission shall not occur if to do so would violate any law, including but not limited to Article I, §10 of the United States Constitution and Article I, §16 of the California Constitution or if prohibited by any covenant made with the holders of any bonds or obligations payable from this transactions and use tax. The Governing Board of the Authority shall take such action only after receiving a recommendation regarding such rescission or modification from the Financial Oversight Committee and, subsequent to such receipt, conducting a noticed public hearing. Such action shall be subject to California law pertaining to the cancellation of prior contractual obligations and the rules and regulations of the State Board of Equalization.

SECTION 11. Purpose.

This Ordinance is adopted to achieve the following, among other purposes, and directs that the provisions hereof be interpreted in order to accomplish those purposes:

A. To impose a one half of one percent retail transactions and use tax in accordance with the provisions of Part 1.6 (commencing with Section 7251) of Division 2 of the Revenue and Taxation Code and Section 7285.5 of Part 1.7 of Division 2 which authorizes the Authority to adopt this tax Ordinance which shall be operative only if two–thirds of the electors voting on this Ordinance approve same at an election called for that purpose.

B. To adopt a retail transactions and use tax Ordinance which incorporates provisions identical to those of the Sales and Use Tax Law of the State of California insofar as those provisions are not inconsistent with the requirements and limitations contained in Part 1.6 of Division 2 of the Revenue and Taxation Code.

C. To adopt a retail transactions and use tax Ordinance which imposes a tax and provides a measure therefor that can be administered and collected by the State Board of Equalization in a manner that adapts itself as fully as practicable to, and requires the least possible deviation from, the existing statutory and administrative procedures followed by the State Board of Equalization in administering and collecting the California Sales and Use Taxes.

D. To adopt a retail transactions and use tax Ordinance which can be administered in a manner which will be, to the greatest degree possible, consistent with the provisions of Part 1.6 of Division 2 of the Revenue and Taxation Code, minimize the cost of collecting the transactions and use taxes, and at the same time, minimize the burden of recordkeeping upon persons subject to taxation under the provisions of this Ordinance.

E. To establish an expenditure limit for the Authority as required by Article XIIIB of the California Constitution.

F. To authorize bonds and other obligations to be issued for the purpose of financing projects in the expenditure plan with said bonds or other obligations to be payable from the transaction and use tax proceeds.

SECTION 12. Operative Date; Contract with the State.

The operative date of this Ordinance, at which time collection of the tax imposed by this Ordinance shall commence, is July 1, 1998. Prior to July 1, 1998, the Authority shall contract with the State Board of Equalization to perform all functions incident to the administration and operation of this Transactions and Use Tax Ordinance; provided, that if the Authority shall not have contracted with the State Board of Equalization prior to the operative date, it shall nevertheless so contract and in such a case the operative date shall be the first day of the first calendar quarter following the execution of such contract.

SECTION 13 Transactions Tax Rate.

For the privilege of selling tangible personal property at retail, a tax is hereby imposed upon all retailers in the incorporated and unincorporated territory of the District at the rate of one–half of one percent of the gross receipts of any retailer from the sale of all tangible personal property sold at retail in said territory on and after the operative date of this Ordinance. The tax shall be imposed for a period of twenty years.

SECTION 14. Place of Sale.

For the purposes of this Ordinance, all retail sales are consummated at the place of business of the retailer unless the tangible personal property sold is delivered by the retailer or his agent to an out–of–state destination or to a common carrier for delivery to an out–of–state destination. The gross receipts from such sales shall include delivery charges, when such charges are subject to the state sales and use tax, regardless of the place to which delivery is made. In the event a retailer has no permanent place of business in the State or has more than one place of business, the place or places at which the retail sales are consummated shall be determined under the rules and regulations to be prescribed and adopted by the State Board of Equalization.

SECTION 15. Use Tax Rate.

An excise tax is hereby imposed on the storage, use or other consumption in the incorporated and unincorporated area of the District of tangible personal property purchased from any retailer on and after the operative date of this Ordinance for storage, use or other consumption in said territory at the rate of one–half of one percent of the sales price of the property. The sales price shall include delivery charges when such charges are subject to state sales or use tax regardless of the place to which delivery is made. The tax shall be imposed for a period of twenty years.

SECTION 16. Adoption of Provisions of State Law.

Except as otherwise provided in this Ordinance, and except insofar as they are inconsistent with the provisions of Part 1.6 of Division 2 of the Revenue and Taxation Code, all of the provisions of Part 1 (commencing with Section 6001) of Division 2 of the Revenue and Taxation Code are hereby adopted and made a part of this Ordinance as though fully set forth herein.

SECTION 17. Limitations On Adoption of State Law and Collections of Use Taxes.

In adopting this provisions of Part 1 of Division 2 of the Revenue and Taxation Code:

A. Wherever the State of California is named or referred to as the taxing agency, the name of this Authority shall be substituted therefor. However, the substitution shall not be made when:

1. The word "State" is used as a part of the title of the State Controller, State Treasurer, State Board of Control, State Board of Equalization, State Treasury, or the Constitution of the State of California;

2. The result of that substitution would require action to be taken by or against this Authority or any agency, officer, or employee thereof rather than by or against the State Board of Equalization, in performing the functions incident to the administration or operation of this Ordinance.

3. In those sections, including, but not necessarily limited to, sections referring to the exterior boundaries of the State of California, where the result of the substitution would be to:

a. Provide an exemption from this tax with respect to certain sales, storage, use or other consumption of tangible personal property which would not otherwise be exempt from this tax while such sales, storage, use or other consumption remain subject to tax by the State under the provisions of Part 1 of Division 2 of the Revenue and Taxation Code; or

b. Impose this tax with respect to certain sales, storage, use or other consumption of tangible personal property which would not be subject to tax by the state under the said provision of that code.

4. In Sections 6701, 6702 (except the last sentence thereof), 6711, 6715, 6737, 6797 or 6828 of the Revenue and Taxation Code.

B. The word "District" shall be substituted for the word "State" in the phrase "retailer engaged in business in this State" in Section 6203 and in the definition of that phrase in Section 6203.

SECTION 18. Permit Not Required.

If a seller's permit has been issued to a retailer under Section 6067 of the Revenue and Taxation Code, an additional transactor's permit shall not be required by this Ordinance.

SECTION 19. Exemptions and Exclusions.

A. There shall be excluded from the measure of the transactions tax and the use tax the amount of any sales tax or use tax imposed by the State of California or by any city, city and county,

or county pursuant to the Bradley–Burns Uniform Local Sales and Use Tax Law or the amount of any state–administered transactions or use tax.

B. There are exempted from the computation of the amount of transactions tax the gross receipts from:

1. Sales of tangible personal property, other than fuel or petroleum products, to operators of aircraft to be used or consumed principally outside the County in which the sale is made and directly and exclusively in the use of such aircraft as common carriers of persons or property under the authority of the laws of this State, the United States, or any foreign government.

2. Sales of property to be used outside the District which is shipped to a point outside the District, pursuant to the contract of sale, by delivery to such point by the retailer or his agent, or by delivery by the retailer to a carrier for shipment to a consignee at such point. For the purposes of this paragraph, delivery to a point outside the district shall be satisfied:

a. With respect to vehicles (other than commercial vehicles) subject to registration pursuant to Chapter 1 (commencing with Section 4000) of Division 3 of the Vehicle Code, aircraft licensed in compliance with Section 21411 of the Public Utilities Code, and undocumented vessels registered under Chapter 2 of Division 3.5 (commencing with section 9840) of the Vehicle Code by registration to an out–of–District address and by a declaration under penalty of perjury, signed by the buyer, stating that such address is, in fact, his or her principal place of residence; and

b. With respect to commercial vehicles, by registration to a place of business out–of–District and declaration under penalty of perjury, signed by the buyer, that the vehicle will be operated from that address.

3. The sale of tangible personal property if the seller is obligated to furnish the property for a fixed price pursuant to a contract entered into prior to the operative date of this Ordinance.

4. A lease of tangible personal property which is a continuing sale of such property, for any period of time for which the lessor is obligated to lease the property for an amount fixed by the lease prior to the operative date of this Ordinance.

5. For the purposes of subsections (3) and (4) of this section, the sale or lease of tangible personal property shall be deemed not to be obligated pursuant to a contract or lease for any period of time for which any party to the contract or lease has the unconditional right to terminate the contract or lease upon notice, whether or not such right is exercised.

C. There are exempted from the use tax imposed by this Ordinance, the storage, use or other consumption in this district of tangible personal property:

1. The gross receipts from the sale of which have been subject to a transactions tax under any state–administrered transactions and use tax Ordinance.

2. Other than fuel or petroleum products purchased by operators of aircraft and used or consumed by such operators directly and exclusively in the use of such aircraft as common carriers of persons or property for hire or compensation under a certificate of public convenience and necessity issued pursuant to the laws of this State, the United States, or any foreign government. This exemption is in addition to the exemptions provided in Sections 6366 and 6366.1 of the Revenue and Taxation Code of the State of California.

3. If the purchaser is obligated to purchase the property for a fixed price pursuant to a contract entered into prior to the operative date of this Ordinance.

4. If the possession of, or the exercise of any right or power over, the tangible personal property arises under a lease which is a continuing purchase of such property for any period of time

for which the lessee is obligated to lease the property for an amount fixed by a lease prior to the operative date of this Ordinance.

5. For the purposes of subsections (3) and (4) of this section, storage, use, or other consumption, or possession of, or exercise of any right or power over, tangible personal property shall be deemed not to be obligated pursuant to a contract or lease for any period of time for which any party to the contract or lease has the unconditional right to terminate the contract or lease upon notice, whether or not such right is exercised.

6. Except as provided in subparagraph (7), a retailer engaged in business in the District shall not be required to collect use tax from the purchaser of tangible personal property, unless the retailer ships or delivers the property into the District, or participates within the District in making the sale of the property, including, but not limited to, soliciting or receiving the order either directly or indirectly, at a place of business of the retailer in the district or through any representative, agent, canvasser, solicitor, subsidiary or person in the District under the authority of the retailer.

7. "A retailer engaged in business in the District" shall also include any retailer of any of the following: vehicles subject to registration pursuant to Chapter 1 (commencing with Section 4000) of Division 3 of the Vehicle Code, aircraft licensed in compliance with Section 21411 of the Public Utilities Code, or undocumented vessels registered under Chapter 2 of Division 3.5 (commencing with Section 9840) of the Vehicle Code. That retailer shall be required to collect use tax from any purchaser who registers or licenses the vehicle, vessel, or aircraft at an address in the District.

D. Any person subject to use tax under this Ordinance may credit against that tax any transactions tax or reimbursement for transactions tax paid to a district imposing, or retailer liable for, a transactions tax pursuant to Part 1.6 of Division 2 of the Revenue and Taxation Code, with respect to the sale to the person of the property the storage, use or other consumption of which is subject to the use tax.

SECTION 20. Bonds and Other Obligations.

Upon voter approval of this Ordinance, the Authority shall have the authority to issue bonds or other obligations (including, without limitation, lease or installment sales agreements) to finance any of the projects included in the Plan as it may be amended from time to time (including reserves and other financing costs), which bonds or other obligations shall be payable from the revenues of the Flood Protection Sales Tax. In allocating Flood Protection Sales Tax revenues all debt service requirements and other financing costs of such bonds and other obligations shall be met prior to allocating funds for any other purposes or projects.

SECTION 21. Amendments.

All amendments subsequent to the effective date of this Ordinance to Part 1 of Division 2 of the Revenue and Taxation Code relating to transactions and use taxes and which are not inconsistent with Part 1.6 of Division 2 of the Revenue and Taxation Code, and all amendments to Part 1.6 of Division 2 of the Revenue and Taxation Code, shall automatically become part of this Ordinance, provided, however, that no such amendment shall operate so as to increase the rate of tax imposed by this Ordinance or extend the period of time the tax will remain in effect.

SECTION 22. Enjoining Collection Forbidden.

No injunction or writ of mandate or other legal or equitable process shall issue in any suit, action or proceeding in any court against the State or the Authority, or against any officer of the State or the Authority, to prevent or enjoin the collection under this Ordinance, or Part 1.6 of Division 2 of the Revenue and Taxation Code, of any tax or any amount of tax required to be collected.

SECTION 23. Napa County Auditor-Controller Audit.

In addition to the audit required pursuant to Section 9(A)(2)(b), the Napa County Auditor–Controller shall annually conduct an audit of how the new transactions and use tax revenues are spent by the County of Napa. The audit shall be published in at least two County newspapers and copies of the audit shall be provided to, and must be available at, every public library located in the County.

SECTION 24. Severability.

If any provision of this Ordinance or the application thereof to any person or circumstances is held invalid or unconstitutional, such invalidity or unconstitutionality shall not affect other provisions or applications of this Ordinance which can be given effect without the invalid or unconstitutional provision or application, and to this end the provisions of this Ordinance are severable.

SECTION 25. Effective Date; Approval of the Voters.

This Ordinance shall take effect on March 3, 1998, but only if 2/3rds of the electors voting on the Ordinance at an election held on March 3, 1998, vote to approve this Ordinance.

SECTION 26. Annual Appropriation Limit.

The maximum annual appropriation limit for the Authority is $20,000,000.00, subject to such adjustments or increases as are provided for by law.

SECTION 27. Implementation Subsequent to Vote.

Upon approval of this Ordinance by 2/3rds of the voters, the Authority may adopt policies and take such actions as may be necessary for the implementation of the one–half of one percent (1/2%) transactions and use tax authorized by this Ordinance. Such actions shall include, but not be limited to, the Authority amending this Ordinance without being required to secure a ratification by the electorate to provide for use of additional federal, state or local funds, to account for unexpected revenues, or to take into consideration unforeseen circumstances, or if such amendments are deemed necessary and recommended by the Authority's general counsel, bond counsel, or legal counsel for the State Board of Equalization; provided, however, that no amendments that will increase the rate of the transactions and use tax rate or extend the term beyond twenty years may be

made without securing the approval of the amendment by the legally required percentage of qualified voters voting on the amendment.

SECTION 28. Publication of Ordinance.

This Ordinance shall be published at least once before the expiration of 15 days after its passage in the Napa Valley Register, a newspaper of general circulation published in the County of Napa, together with the names of the Directors voting for and against the same.

The foregoing Ordinance was introduced and read at a special meeting of the Napa County Flood Protection and Watershed Improvement Authority, held on the 28th day of October, 1997 and passed at a special meeting of the Napa County Flood Protection and Watershed Improvement Authority, held on the 4th day of November, 1997, by the following vote:

AYES:	**DIRECTORS**	VARRELMAN, LUCE, FERRIOLE, WINTER and RIPPEY
NOES:	**DIRECTORS**	NONE
ABSTAIN:	**DIRECTORS**	NONE
ABSENT:	**DIRECTORS**	NONE

MIKE RIPPEY, Chairman
Board of Directors

ATTEST:

MARY JEAN McLAUGHLIN
Clerk of the Board
By Teri Sisson
Deputy

APPROVED AS TO FORM
Office of County Counsel
By:
Date: 10/30/97

APPROVED NOV 04 1997
BOARD OF SUPERVISORS
COUNTY OF NAPA

MARY JEAN MCLAUGHLIN
CLERK OF THE BOARD

BY Michelle Price Deputy

ATTACHMENT TO LETTER 84

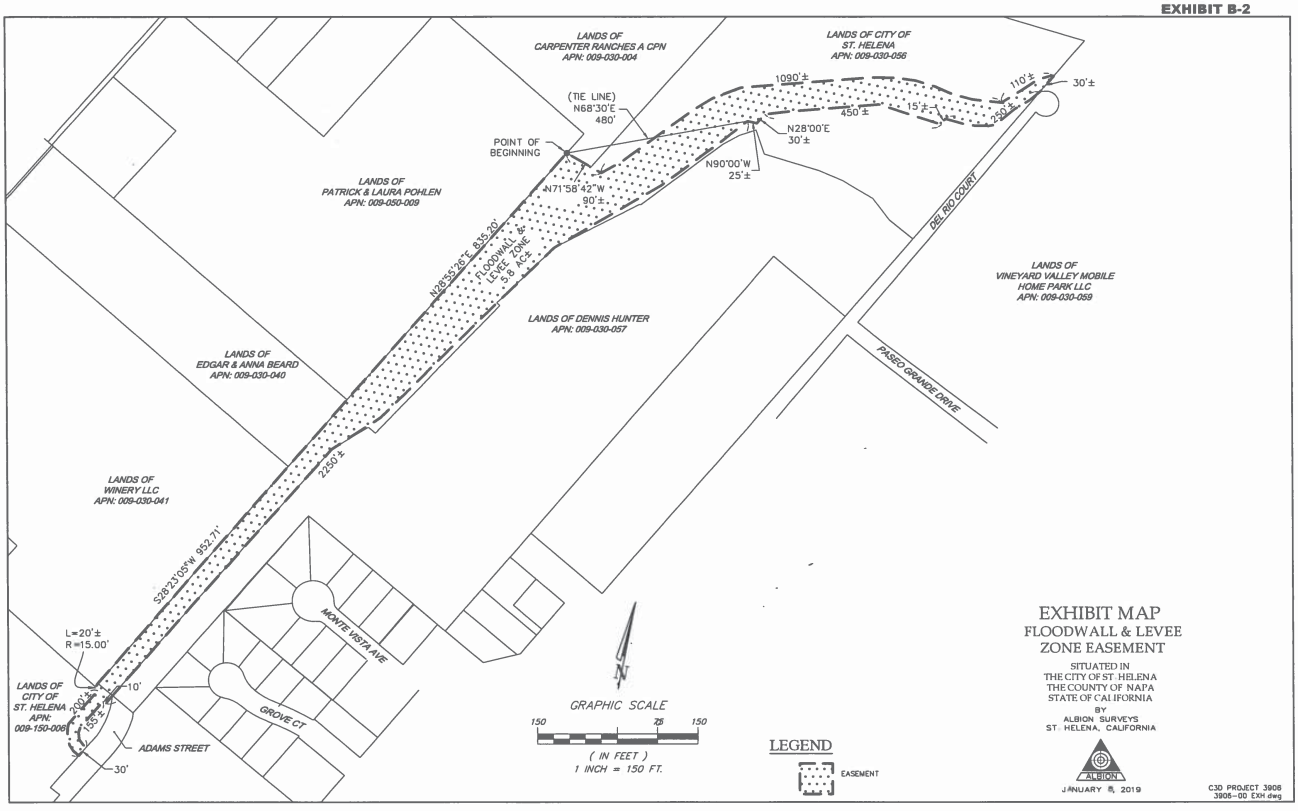


EXHIBIT B-2
LANDS OF CARPENTER RANCHES A CPN APN: 009-030-004
LANDS OF CITY OF ST. HELENA APN: 009-030-056
(TIE LINE) N68°30'E 480'
POINT OF BEGINNING
N71°58'42"W 90'±
N28°00'E 30'±
N90°00'W 25'±
1090'±
450'±
15'±
110'±
30'±
250'±
LANDS OF PATRICK & LAURA POHLEN APN: 009-050-009
N28°35'26"E 835.20'
FLOODWALL & LEVEE ZONE 5.6 AC±
DEL RIO COURT
LANDS OF VINEYARD VALLEY MOBILE HOME PARK LLC APN: 009-030-059
LANDS OF DENNIS HUNTER APN: 009-030-057
LANDS OF EDGAR & ANNA BEARD APN: 009-030-040
PASEO GRANDE DRIVE
2250'±
LANDS OF WINERY LLC APN: 009-030-041
S28°31'05"W 852.71'
L=20'±
R=15.00'
MONTE VISTA AVE
LANDS OF CITY OF ST. HELENA APN: 009-150-006
200'±
155'±
10'
GROVE CT
ADAMS STREET
30'
N
GRAPHIC SCALE
150 75 150
(IN FEET)
1 INCH = 150 FT.
LEGEND
EASEMENT
EXHIBIT MAP
FLOODWALL & LEVEE ZONE EASEMENT
SITUATED IN THE CITY OF ST. HELENA THE COUNTY OF NAPA STATE OF CALIFORNIA
BY
ALBION SURVEYS
ST. HELENA, CALIFORNIA
ALBION
JANUARY 8, 2019
C3D PROJECT 3908
3908-00 EXH.dwg

Potential Issues Related to the Adams Street Extension to the Silverado Trail

The Adams Street extension to the Silverado Trail could potentially create problems for the City's largest-ever public project, namely the St Helena Comprehensive Flood Control Project. While that street extension appears in the 1993 General Plan and the 2040 General Plan Update, it did not appear as part of any of the county, state or federal funding agreements, which were the funding sources for nearly all of the money used to build the flood control project. Nor did the street extension appear as part of permit applications or approvals required to build the levee or flood wall. While the original design of the Flood Control Project, which was done right after Measure A passed, showed a discretionary extension of the Adams Street to the Silverado Trail, it was not part of the project by the time the EIR was finalized, the RFP was let for the flood control project and all permitting, funding and approvals were done after 2006. There is, unfortunately, a common misconception in St Helena that the extension of Adams Street to the Silverado Trail was somehow approved as part of the Flood Control Project and because it appears in the 2040 GPU. There are, however, a number of other important issues related to this particular project.

1. There were at least six different funding sources for the Flood Control Project, almost all of which had specific requirements in order to obtain funding and some of those requirements extend into perpetuity. Two of the funding sources were federal, two were from the state, one was from the county and the last was from the City's own general fund. With the exception of the funds from the City's general fund, none of the five other funding sources considered the extension of the Adams Street to the Silverado Trail and its impact on the Flood Control Project in their approval of their funds for the levee and floodwall project.

   For example, the "Maintenance and Property Improved" section of one of the state funding sources states:

   "Grantee agrees to use, manage and maintain the property developed, rehabilitated or restored with the grant funds provided in this Agreement consistent with the purposes of the program and is required to continue into perpetuity or until deemed no longer necessary by the State."

At the very least it appears the City would need to get the state's approval to build the extension of Adams Street, since the road extension was not considered when the project was approved and funded and, therefore, would not be considered "consistent with the purpose of the program," which was entirely a flood control project and not in any way a road project.

In seeking the State's approval, however, the issue of whether or not the levee and flood wall have been maintained according to the Army Corp of Engineers standards (which is required by the Flood Control Project's operational and maintenance manual) will likely be examined. From documentation about the maintenance of the levee for the first five years from its completion through 2015, it is absolutely clear it had not been maintained according to the Army Corp of Engineer standards and, in fact, has had barely any maintenance. The documentation of the maintenance of the Flood Control Project from 2016 to the present has not been available, but it is clear from the hundreds of gopher holes appearing every year in both the levee and foundation of the flood wall, no other conclusion could be reached other than the maintenance of our largest project has not been robust, let alone up to acceptable standards. Residents have been taking pictures of the gopher holes appearing each year in the levee and flood wall, just in case it ever becomes an issue. According to Dr. Nicholas Pinter, a national levee expert currently at UCD, who has spent time examining the St Helena levee and the issues related to it, has said that burrowing animals on any levee is one of the signs that a levee is not being maintained appropriately. Keeping burrowing animals away from the levee is one of the first issues raised in the Flood Control Project's own operation and maintenance manual.

2. There were also at least eight state and federal permits or approvals required in order to build the levee, flood wall, terraces, etc. Many of these permits involved specific requirements and were issued without any consideration of the extension of Adams Street. While the 1993 General Plan Circulation Element showed Adams Street as a potential street extension to the Silverado Trail, it was not a factor considered in any decision to either issue required permits or in providing funding for the Flood Control Project. To now attempt to extend Adams Street to the Trail may jeopardize some of those permits and approvals. Examples of some of the unique permits and approvals required include:

    California Endangered Species Act Incidental Take Permit;

California Fish and Game Streambed Alteration Agreement;
US Army Corp of Engineers 404 Permit;
State Water Resources Control Board Section 401Water Quality Certification;
State Historic Preservation Office;
Bay Area Regional Water Quality Control Board National Pollution Discharge Elimination System permit; and
US Fish and Wildlife Service and Atmospheric Administration Fisheries Section 7 approval.

As an example, according to the staff report to the City Council dated May 24, 2016, the California Endangered Species Act Incidental Take Permit (ITP) No. 2081-2009-004-03 through the California Department of Fish and Wildlife (DFW) required, as a mitigation measure, that a deed restriction into perpetuity be placed over a portion of the city-owned land consisting of two parcels totaling approximately 10 acres. In addition to this requirement, the funding from the Department of Water Resources (DWR) required the creation of a conservation easement deeded into perpetuity over the same area of city-owned land. This staff report goes onto explain that in 2016 the City worked with the state to develop a specific deed restriction acceptable to the state, which was discussed at that City Council meeting. The state approved the Land Trust of Napa County (Land Trust) as the third-party easement holder. To avoid a duplication of efforts, both DWR and DFW mutually agreed upon a single conservation easement and the Land Trust as the conservation easement holder.

According to the staff report, during an on-site meeting with the Land Trust staff in 2016, the subject of the extension of Adams Street extension was discussed. The conservation easement would only permit the maintenance of existing infrastructure, flood control measures and habitat. It would prohibit the construction of a street, pedestrian path or bicycle lane on that portion of the City-owned property. The staff report concluded that Adams Street could not be extended to the Silverado Trail.

To ensure that there were no other alternatives available at that time (in 2016), City staff reached out to both DWR and DFW about the conflict between the 1993 General Plan (and the proposed GPU) regarding the extension of Adams St. DWR told the City staff that it would not approve a change to the conservation easement area or possible alternative mitigation to satisfy the requirements for the grant funds. This grant was scored and

awarded partially as a reflection of the proposed mitigation measures. If the conservation easement approved by the state in 2016 was not approved, then it is possible that the basis for the grant application approval would no longer be supported and all funds would have to be returned. In order to close out that grant it would be necessary to approve the road-restricted conservation easement and record it.

The staff report goes on to explain that if the City decided to return the grant money to the DWR, it would still be necessary to work with DFW before any consideration could be given to extending Adams Street. An alignment study would be necessary to satisfy the original Endangers Species Incidental Take Permit to look at what portion would be taken out of the conservation easement to make room for the street extension. After this is done the City would have to submit a request describing the proposed area to be removed from the deed restriction for the road. DFW would then review the proposal and, either recommend alternative-mitigation measures to satisfy the original permit or to deny it. The staff report concluded that if alternative mitigation measures were approved, they would be significantly more expensive and any alternative mitigation within the existing permit area would likely cause higher mitigation requirements on other projects when future permits are issued. If DFW denies the request, then there could be some significant financial consequences ($173,000) and the complete conservation easement would be required.

At the City Council meeting in May 2016 there was much discussion of the effect of the conservation easement discussed with DWR, DFW and the Land Trust on the extension of Adams Street to the Silverado Trail. The conclusion at the City Council meeting was clear, namely the approval of the conservation easement that the state was seeking would foreclose the extension of Adams Street to the Trail. The City Council approved the proposal.

Three months after the City Council approved the conservation easement that would foreclose the extension of Adams Street to the Silverado Trail, the Land Trust Board of Trustees approved the project on July 28, 2016 at their Board meeting.

Nearly two years after the City Council approved the conservation easement that would not allow the extension of Adams Street to the Silverado Trail, the issue again was raised at the March 13, 2018 City Council meeting. At

that meeting the Council approved a contract with 'the Land Trust of Napa County for a conservation easement as required by the terms of the Department of Water Resources grant contract No. 4600009016 for an amount not to exceed $65,000." The staff report explains that staff would work with both the Land Trust and DWR on the deed restriction. Nowhere in the staff report does it mention any of the following: (1) the prior City Council's approval on May 24, 2016 of a conservation easement, which would effectively restrict a roadway through the 10-acre site; (2) the prior conversations in 2016 on the conservation easement with both the Land Trust, DWR and DFW; and (3) the conservation easement into perpetuity requirement resulting from the granting of the Endangered Species Act Incidental Take Permit.

On October 23, 2018 (or two and a half years after the City Council approved the conservation easement, which effectively restricted the extension of Adams Street to the Trail), the City Council approved a second conservation easement giving the City the ability to approve a roadway through the 10-acre site required for a conservation easement. Once again, the staff report does not mention the May 24, 2016 City Council approval of a conservation easement effectively foreclosing the extension of Adams Street to the Trail, nor does it mention the Department of Fish and Wildlife's requirement for the very same restricted conservation easement because of the ITP granted to the City when it built the Flood Control Project. Also, of some importance, is the statement in the staff report that the City had been working with the Land Trust since March 2018, when, in fact, the staff had worked with the Trust well before May 2016. By not including the information about the prior City Council approval of the road-restricted conservation easement and the information about City's prior conversations with DWR, DFW and the Land Trust, it might call into question the appropriateness of the October 23, 2018 conservation easement approved by the Council. Both the City Council and the public were not furnished accurate or complete information before the Council took action.

It is unknown if the City has recorded any easement as required by the ITP and DWR grant. Also unknown is, whether or not, the second conservation easement approved by the City Council was prefaced by any conversation with any state agency confirming the change in the previously approved deed restriction concept. It is also unknown how the City closed out the DWR grant without proof of the conservation easement being passed and recorded, which was the key item preventing the grant close out. The

conservation easement was also the final item preventing the City from getting the final $237,000 for eligible project costs. If the grant has not been closed out, both DWR and DFW would have the ability to further audit the project, including the appropriate maintenance of the project and all required mitigation measures. A logical assumption is that the DWR grant has not been paid off because there has been no appropriation by the City Council for that amount of money.

If the City attempts to extend Adams Street to the Trail, it will again be necessary to get an Endangered Species Act Incidental Take Permit from DFW for that project. Unfortunately, this will put the City in the position of asking for approval of a new permit just after the City finished ignoring the mitigation measures agreed to by the City's in its prior ITP for the Flood Project. The likelihood of getting a second ITP would not be strong after ignoring the mitigation measures required in the first ITP.

It is also unclear what position DWR would take, if the City elects to extend Adams Street. Apparently, they were adamant they would not approve it the first time the City asked DWR about it in 2016. It has been nearly a decade since the flood control project was funded and completed and it is now approaching four years since the prior City staff conversations with both DWR and DFW on the issue of the conservation easement and the ability of the City to build a road through it. It probably would be prudent to acknowledge those prior conversation to both DWR and DFW in any of the City's current round of discussions. If the City doesn't do that and the state later finds out about those conversations, then the City may well jeopardize future grants or permits from these same agencies.

There is also another significant potential conservation easement issue. The DWR grant requires a conservation easement into perpetuity basically on any city-owned property on which DWR funds were used for the Flood Control Project. The only area the City originally determined to be included in any easement is 10-acre site of the city-owned land nearest the river. The expense payment reimbursement requests by the City to the DWR under the grant during the construction of the Flood Control Project, however, also appear to include costs used on the project's access road and pedestrian path. This area is also city-owned land and is not included in the 10-acre conservation easement. This is the city-owned property furthest from the river and which connects the access road and pedestrian path adjacent to the current terminus of Adams St to the original 10-acre conservation easement

site closest to the river. If that is correct, then the part of the project closest to the current Adams Street terminus would also have to be placed into the conservation easement into perpetuity in order to satisfy the grant agreement. Even a cursory look at some obvious items appearing on and/or making up the pedestrian path and the access road were itemized by the City as having been reimbursed under the DWR grant. This issue has been previously raised with the city a couple of times, but the staff has chosen to ignore it.

3. Shortly after Measure A was passed by the voters in 1998, St Helena began working on a Comprehensive Flood Control Project. In the original design was a levee, which cut the historic flood plain in half. The reason for the location of the levee became apparent, when the City proposed to combine the placement of the levee (to be paid for with Measure A funds) with an all-weather extension of Adams Street to the Silverado Trail, which was called the Adams Street Causeway and Bridge. Glossy brochures were produced by the City and distributed to residents in order to gather public support for the project that specific alignment of the levee to help provide a roadway.

   The 2004 EIR showed the Adams Street extension as a discretionary addition to the Flood Control Project (requiring a separate environmental review) using the levee as the primary vehicle to extend Adams Street to the Trail. On June 23, 2005 the Napa County Flood Protection and Conservation District notified St Helena that the Napa County Flood Protection and Watershed Improvement Authority had made inquiries regarding the levee because <u>any portion of the levee used for a component of a future transportation facility would thereby be ineligible to be constructed using Measure A funds</u>.

   As a result, Jonathon Goldman, the Director of Public Works and City Engineer for St Helena, wrote a letter to Robert J. Peterson, Napa County Flood Control and Water Conservation District Engineer, answering the question as to whether the levee is, in fact, intended to support a road rather than simply to provide flood protection. Goldman's July 12, 2005 letter says the "levee element serves two functions in the Project, (1) provide a barrier against inundation, and (2) provide an onsite location for disposition of soils to be removed from the planned terraces. The planned levee is wider than what would be necessary if only inundation-prevention were the objective. The levee is wider in order to accommodate the disposition of soils to be removed from the terraces. If the soils to be excavated were to be trucked to

offsite disposition, traffic and other potential impacts, as well as the cost of the Project, would increase."

The rest of Goldman's letter to Peterson goes on at great length to try to convince him that the real reason for the wider levee is the volume of soils to be replaced and not the placement of a road on the levee. Assuming that Goldman's information is correct, then there is no assurance that the levee can now sufficiently serve as the foundation for an all-weather road to the Trail, since the only requirement for the wider levee was not to support a transportation facility, but simply to provide a dumpsite for extra soil. Goldman makes clear the levee is wider than necessary to provide inundation-prevention only because it was needed as a dumpsite. The implication here is that the dumpsite was not engineered to support a roadway, because that would have foreclosed Measure A funding. To now claim that additional costs were, in fact, incurred to widen the levee to provide an appropriately engineered infrastructure for a roadway, could put our Measure A funding in jeopardy.

In the 2005 and 2006 Addendums to the 2004-approved EIR, any mention of the Adam Street extension was limited to the fact that it said there was no change from the 2004 EIR because the City was not considering approval of the Adams Street Causeway/Bridge and this issue required no further consideration or analysis.

After the 2005 and 2006 Addendums to the prior-approved 2004 Flood Control Project FEIR, no Flood Control funding applications, permits, etc. likely could go forward with an Adams Street extension to the Silverado Trail as part of it because there was no EIR done on that specific project.

4. Whether the extension of Adams Street is on, adjacent to or near the levee, the levee itself would not be benefited and likely the viability of the levee and Flood Control Project would be negatively impacted. The levee itself has not been maintained appropriately and the City has already told the County that the levee was not constructed in a manor to build a future road, but rather just a "dumping" point for excess soil removed from the project terraces. The levee operational and maintenance manual already requires that a gate be placed on the access to the levee to limit the use of cars on the levee. This only supports the concept that building a public road on the levee was not anticipated in the construction of the levee.

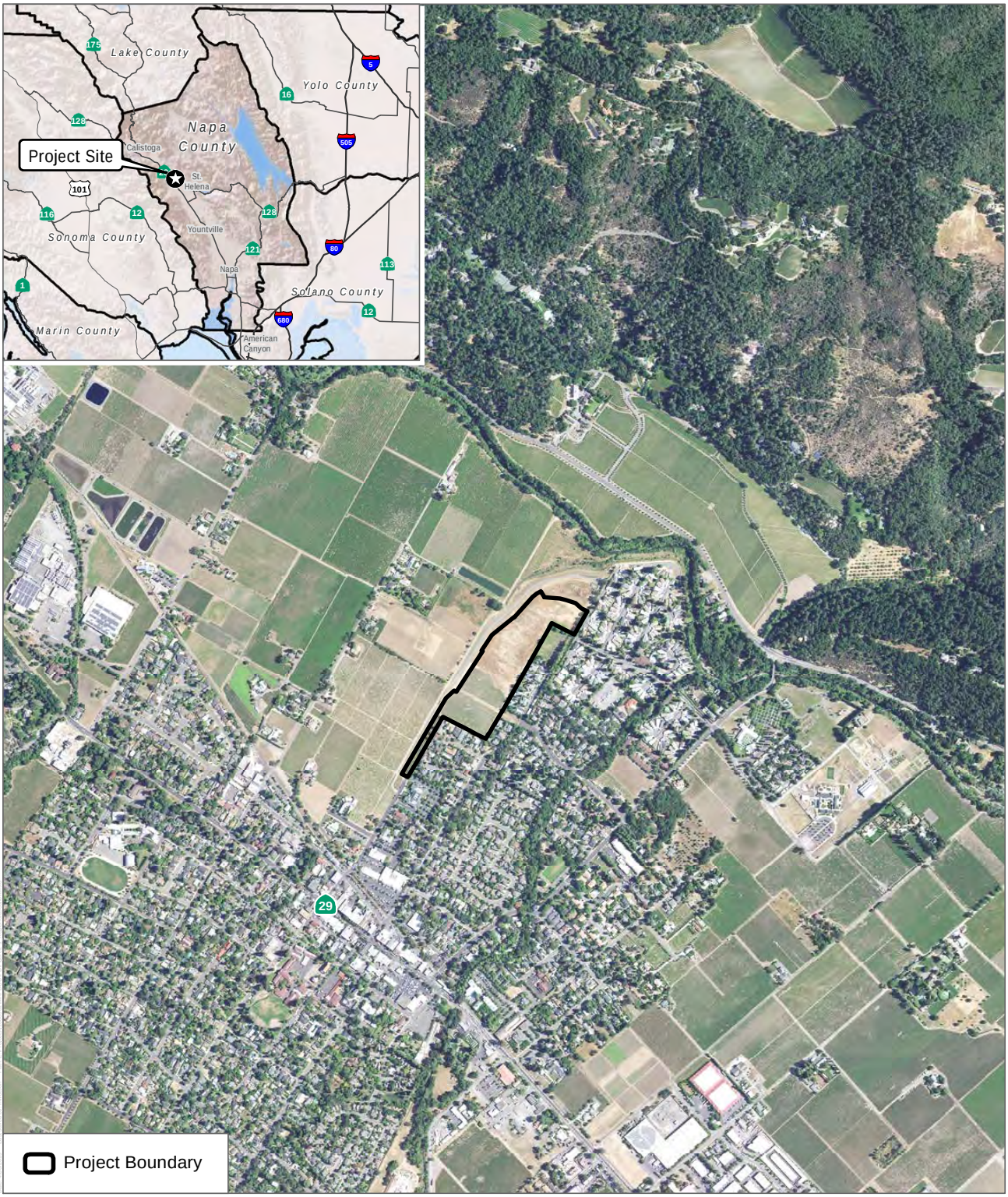
If the roadway is built alongside the levee, then any actual construction of the extended roadway and the bridge to the Trail and any ongoing use of the roadway would not be helpful in maintaining the viability of the levee. The safety and financial risks from a levee failure far outweigh any benefit from an extension of Adams Street to the Trail. Vineyard Valley and Hunts Grove residents are the most vulnerable of our population if the levee fails or its viability is threatened. If the levee fails, particularly because the City failed to maintain it adequately or because the City threatened the viability of it because of building a roadway on top of or adjacent to the levee, then the City would likely bare the financial liability for any damages resulting from the failure. The City assumed that liability once it accepted money from the State as explained in AB 1898 and CA Water Code §12748.3, which basically indemnified the state.

5. The St Helena Comprehensive Flood Control Project was a financial disaster for the City. Not only was the project way over the projected costs, but FEMA clawed-back $1.9M for disallowed expenses (such as the cost of crushing Merlot grapes in Mendocino County). DWR also required the repayment of $2.1M for disallowed expenses and double billing the same expenses to two different state funding sources. It is unclear if that repayment has been completed. As a result of the completely inadequate handling of the financial activities involved in the project, the City hired a forensic accountant. After months of review, the forensic accountant basically gave up. If the City decides to extend Adams St to the Silverado Trail, issues related to the repayment of grants, etc. will once again raise issues concerning the mishandling of the financial accounting of the monies spent on the project. The fact the City has not been able to close out a state grant on a project that was completed in 2010 will not help the City's case.

6. If the City elects to extend Adams Street to the Silverado Trail they will likely need the approval of both DWR and DFW for the reasons explained above. In addition, the City may also need the approval of the Napa County Flood Protection and Watershed Improvement Authority (Measure A authority) since the City previously said the design of the levee was not to facilitate a future transportation facility. Other approvals would possibly need to come from the Army Corp of Engineers, who approved its permit without information pertaining to a potential future roadway on or near the levee. The Army Corp of Engineers would also likely review the maintenance of the levee if their approval is necessary. FEMA, who approved funding for two grants based on flood control needs and then

approved the revised the flood zone after the project was built without any information pertinent to a roadway on or near the levee and its potential impact on the viability of the levee would also likely seek review.

Less problematic options for any additional access to the Silverado Trail from Highway 29 would be Mills Avenue to the south or Fulton Avenue just to the north of Adams Street. Neither of these options would run into any of the financial, administrative or safety problems that as Adams Street extension poses for the City.

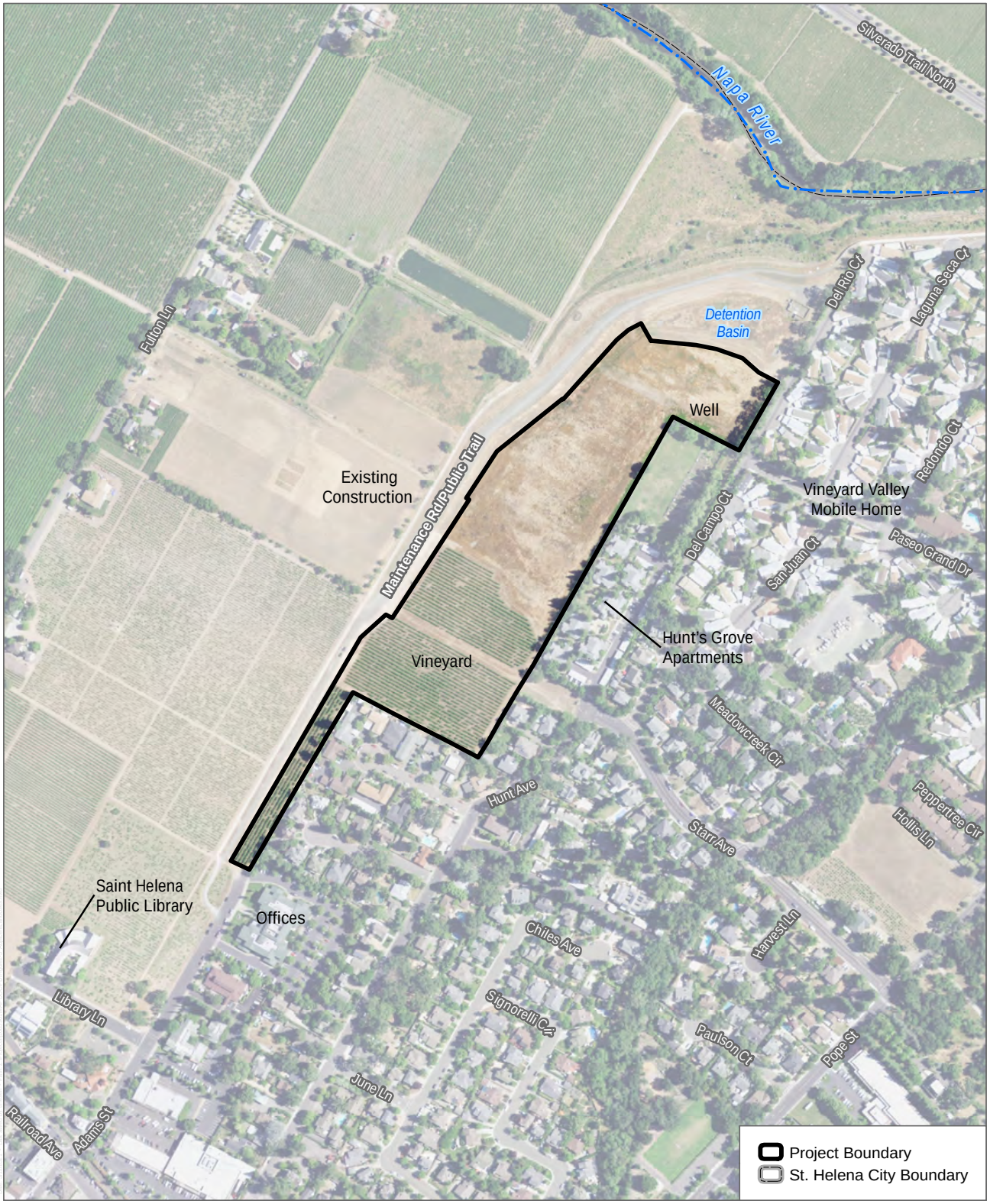


SOURCE: Napa County 2015, USDA 2016

DUDEK

0 600 1,200 Feet

FIGURE 2-1
Regional Location
Hunter Subdivision Project



SOURCE: USDA 2016, USGS 2018, Napa County 2015

DUDEK

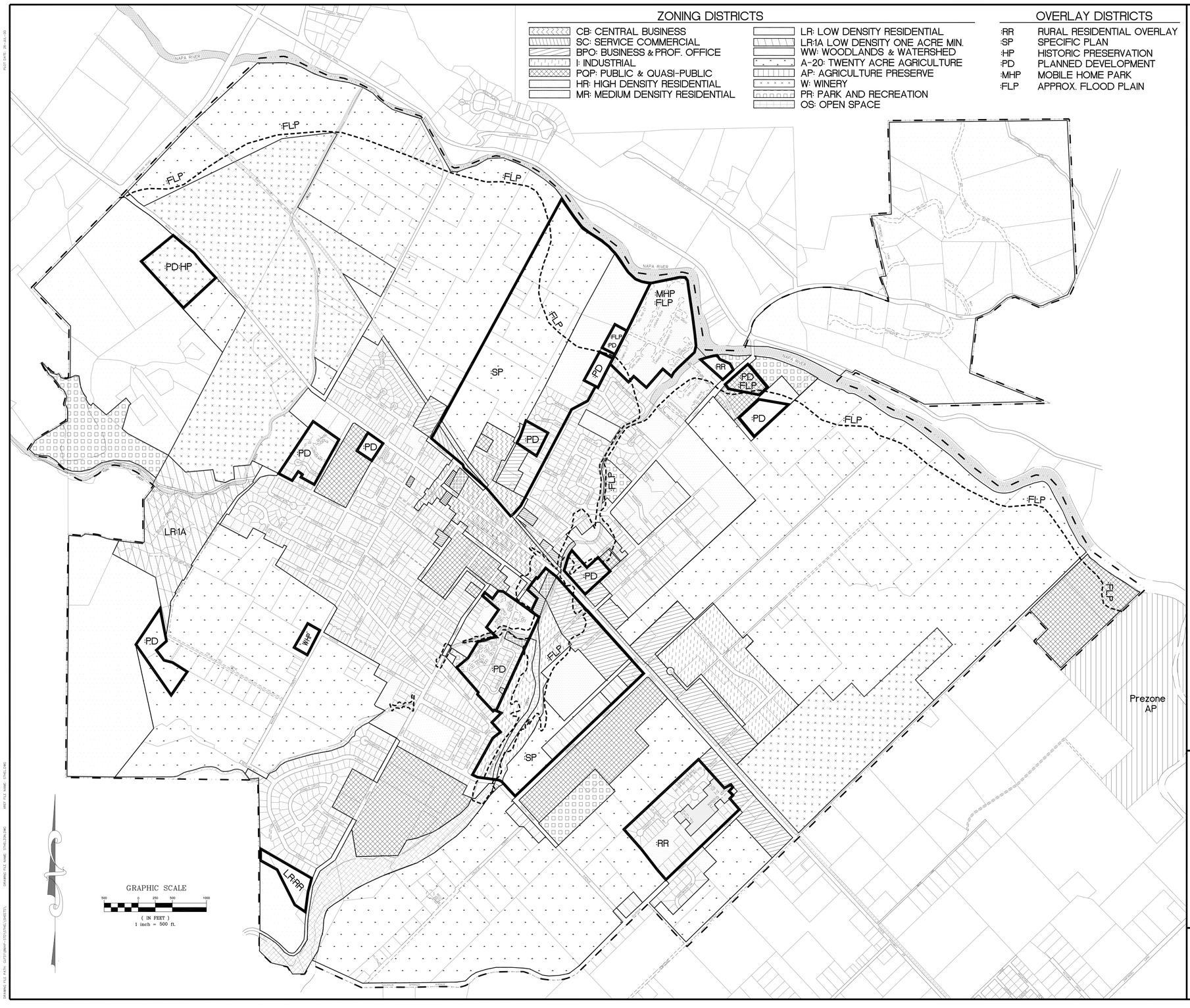
0 200 400 Feet

FIGURE 2-3

Existing On-Site and Adjacent Land Uses

Hunter Subdivision Project

LAND USE DESIGNATIONS
CENTRAL BUSINESS
SERVICE COMMERCIAL
OFFICE
INDUSTRIAL
PUBLIC & QUASI-PUBLIC
HIGH DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
LOW DENSITY RESIDENTIAL
WOODLANDS & WATERSHED
AGRICULTURE
PARK
OPEN SPACE
CITY OF
ST. HELENA
GENERAL PLAN
LAND USE MAP
LEGEND
APPROX. FLOOD HAZARD ZONE (100 YR. LIMIT SEE F.I.R.M. PANEL #060208 005 D 1-7-98)
PROPOSED FRAMEWORK ROADWAYS
RIGHT-OF-WAY RESERVATIONS
CITY LIMITS
URBAN LIMIT LINE
GENERAL PLAN BOUNDARY
ROAD/RIGHT OF WAY
PROPERTY LINE
PRIVATE ROAD
RIVER/CREEK
UR/CBD URBAN RESERVE/CENTRAL BUSINESS DISTRICT
UR/R URBAN RESERVE/RESIDENTIAL
UR/IND URBAN RESERVE/INDUSTRIAL
GRAPHIC SCALE
Coastland Civil Engineering, Inc.
2292 Northpoint Parkway, Santa Rosa, CA 95407
707.571.8005
707.571.8037 Fax



CITY OF ST. HELENA

ZONING MAP

AUGUST 2000

ADOPTED: APRIL 11, 1994
PRINTED: FEBRUARY 2000

REVISION TO MAP
DATE: RESOLUTION #:

ZONING MAP
CITY OF ST. HELENA

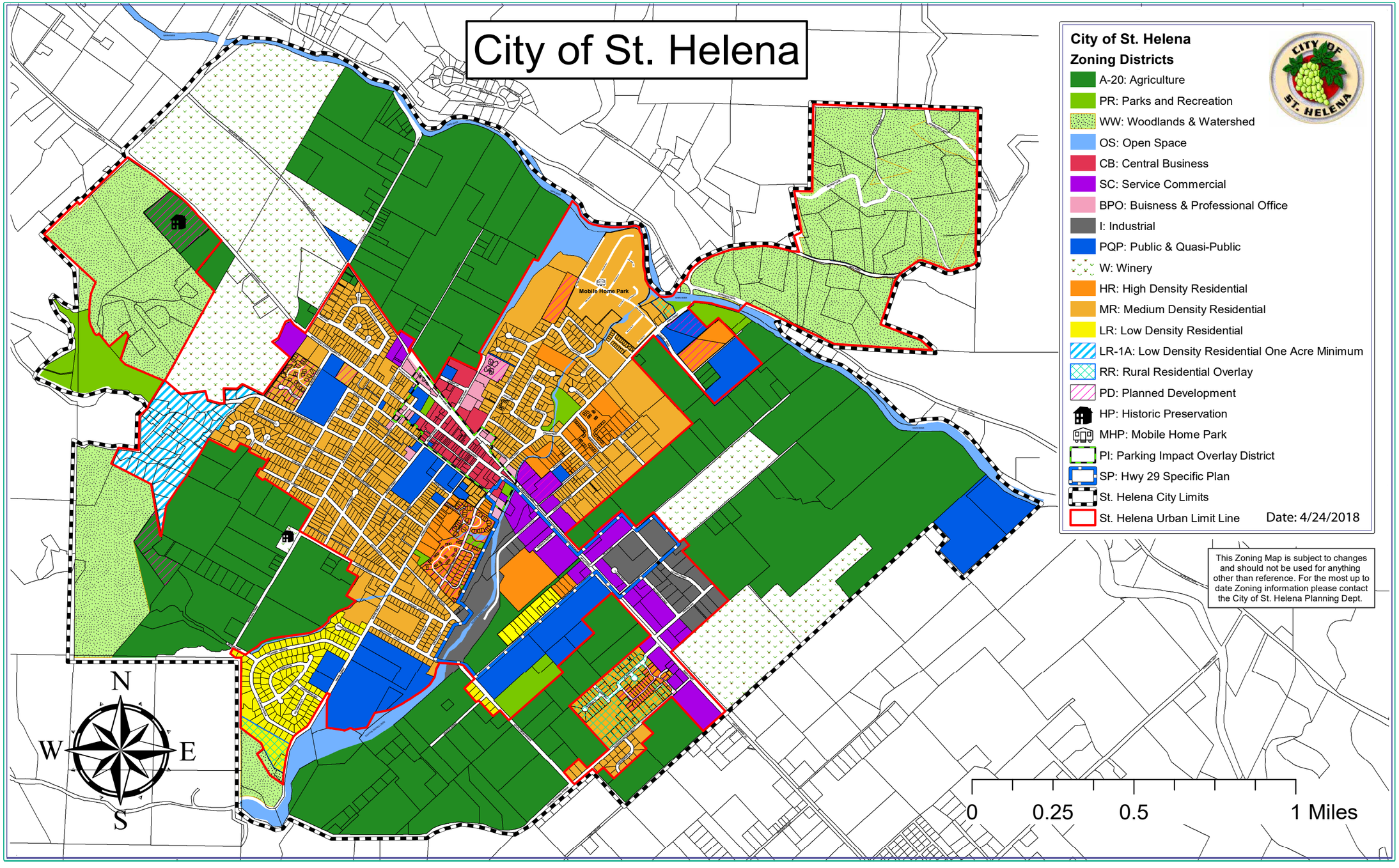
THIS ZONING MAP REPRESENTS THE LAND USE DESIGNATIONS ADOPTED BY THE CITY COUNCIL ON APRIL 11, 1994

LEGEND

- APPROX. FLOOD HAZARD ZONE (100 YR. LIMIT SEE F.I.R.M. PANEL #060208 005 D 1-7-98)
- OVERLAY DISTRICT BOUNDARY
- ZONING DISTRICT BOUNDARY
- ROAD/RIGHT OF WAY
- PROPERTY LINE
- PRIVATE ROAD
- RIVER/CREEK
- CITY LIMITS

Coastland Civil Engineering, Inc.
2292 Northpoint Parkway, Santa Rosa, CA 95407
707.571.8005 707.571.8037 Fax

City of St. Helena

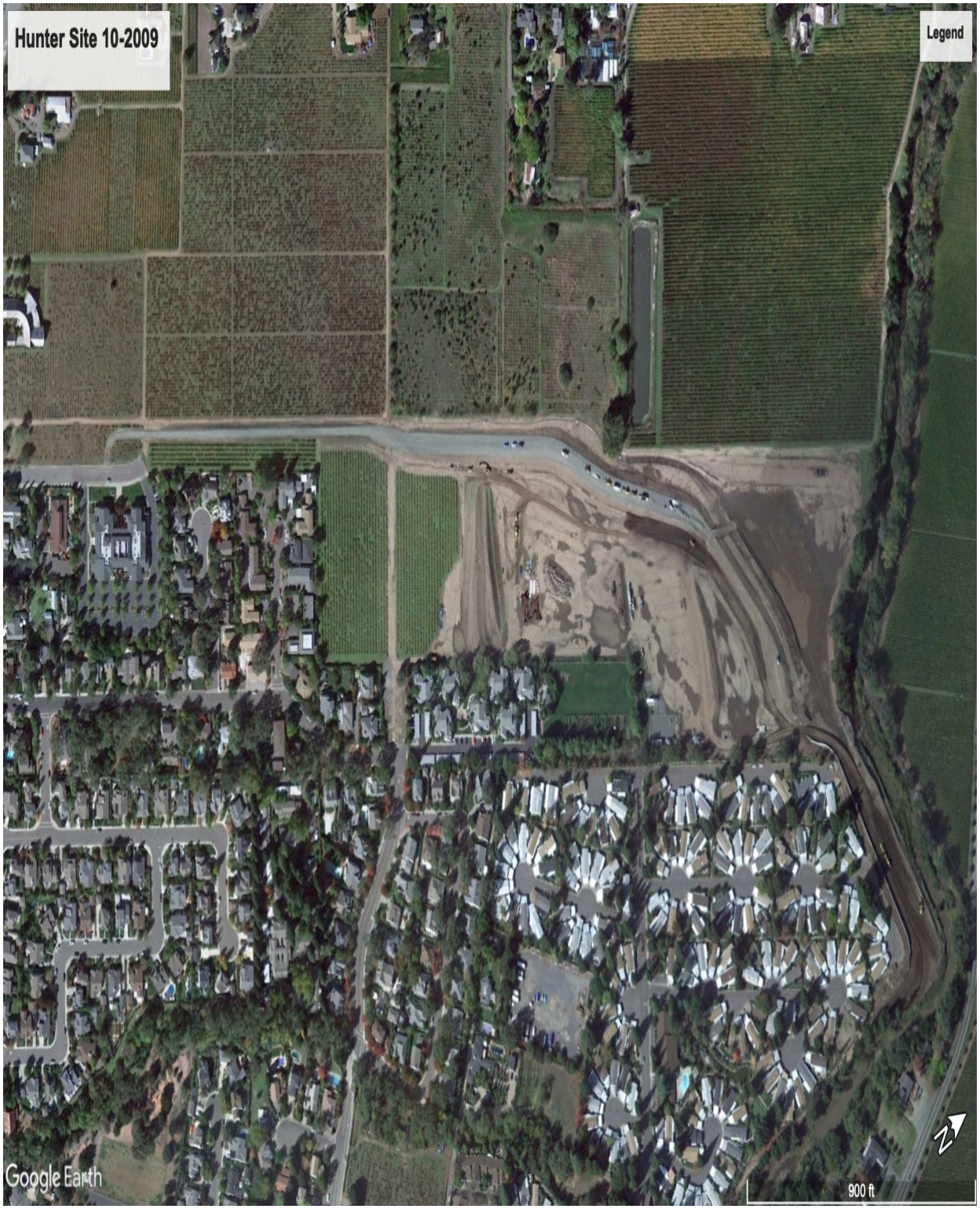


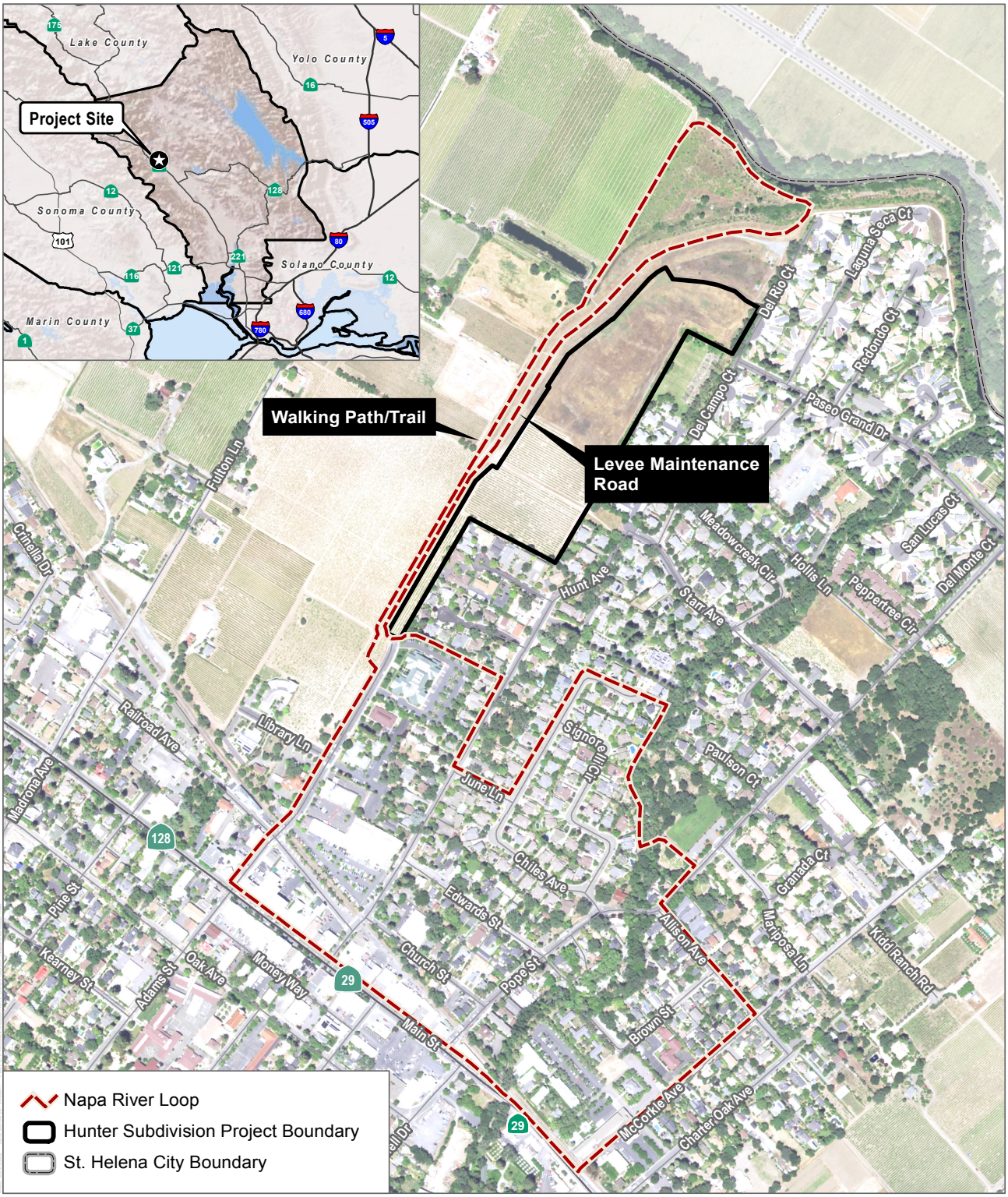
City of St. Helena
Zoning Districts

- A-20: Agriculture
- PR: Parks and Recreation
- WW: Woodlands & Watershed
- OS: Open Space
- CB: Central Business
- SC: Service Commercial
- BPO: Buisness & Professional Office
- I: Industrial
- PQP: Public & Quasi-Public
- W: Winery
- HR: High Density Residential
- MR: Medium Density Residential
- LR: Low Density Residential
- LR-1A: Low Density Residential One Acre Minimum
- RR: Rural Residential Overlay
- PD: Planned Development
- HP: Historic Preservation
- MHP: Mobile Home Park
- PI: Parking Impact Overlay District
- SP: Hwy 29 Specific Plan
- St. Helena City Limits
- St. Helena Urban Limit Line

Date: 4/24/2018

This Zoning Map is subject to changes and should not be used for anything other than reference. For the most up to date Zoning information please contact the City of St. Helena Planning Dept.


Hunter Site 10-2009
Legend
Google Earth
900 ft
N



SOURCE: Napa County 2015, Bing 2022

DUDEK

0 305 610 Feet

Napa River Loop
Hunter Subdivision Project

HUNTER SUBDIVISION TRAFFIC ANALYSIS SUMMARY

The following is a summary of the results of the traffic analysis is Appendix K to the Draft EIR. For detailed information, please refer to the traffic analysis.

Existing Conditions

- Under existing conditions (without project traffic), the City's current level of service (LOS) standards for traffic congestion are exceeded on weekdays at three locations:
    - Main Street/Pope Street-Mitchell Drive: LOS F in the morning peak hour, LOS F in the evening peak hour
    - Paseo Grand Drive – College Avenue/Pope Street: LOS D in the morning peak hour
    - Silverado Trail/Pope Street: LOS D in the evening peak hour

    At ten other locations examined in the study, the City's LOS standards are not exceeded on weekdays.

- On Saturdays, the City's current LOS standards are exceeded at one location:
    - Main Street/Pope Street – Mitchell Drive: LOS F in the evening peak hour

Project Impacts

- The proposed project would add traffic to the local roadway system:
    - A total of 798 trips on a typical weekday
    - 62 weekday morning peak hour trips
    - 82 weekday evening peak hour trips
    - 815 total trips on a weekend day (Saturday)
    - 80 weekend evening peak hour trips
- The addition of traffic from the proposed project to existing traffic would add trips to the local roadway system, and would affect the intersections already exceeding the City's desired LOS standards on weekdays:
    - Main Street/Pope Street – Mitchell Drive: Continues to operate with unsatisfactory LOS at LOS F during both the AM and PM peak hours. However, the increase in delay is less than 5.0 seconds in the AM peak hour (4.8 seconds), while the increase in delay is greater than 5.0 seconds in the PM peak hour (11.4 seconds). This constitutes a deficiency with the City's LOS impact criteria for the PM peak hour.
    - Paseo Grand Drive – College Avenue/Pope Street: Continues to operate with unsatisfactory LOS at LOS D in AM peak hour. This intersection is unsignalized and does not satisfy peak hour signal warrants (traffic signal), and the increase in delay is less than 5.0 seconds (1.1 seconds). Therefore, the project would not exceed the City's impact criteria and would be consistent with the City's LOS policies.
    - Silverado Trail/Pope Street: Continues to operate with unsatisfactory LOS at LOS D in the PM peak hour. This intersection is unsignalized and satisfies the peak hour signal warrant (traffic signal) for the PM peak hour, however the increase in delay is

less than 5.0 seconds (1.3 seconds). Therefore, the project would not exceed the City's impact criteria and would be consistent with the City's LOS policies.

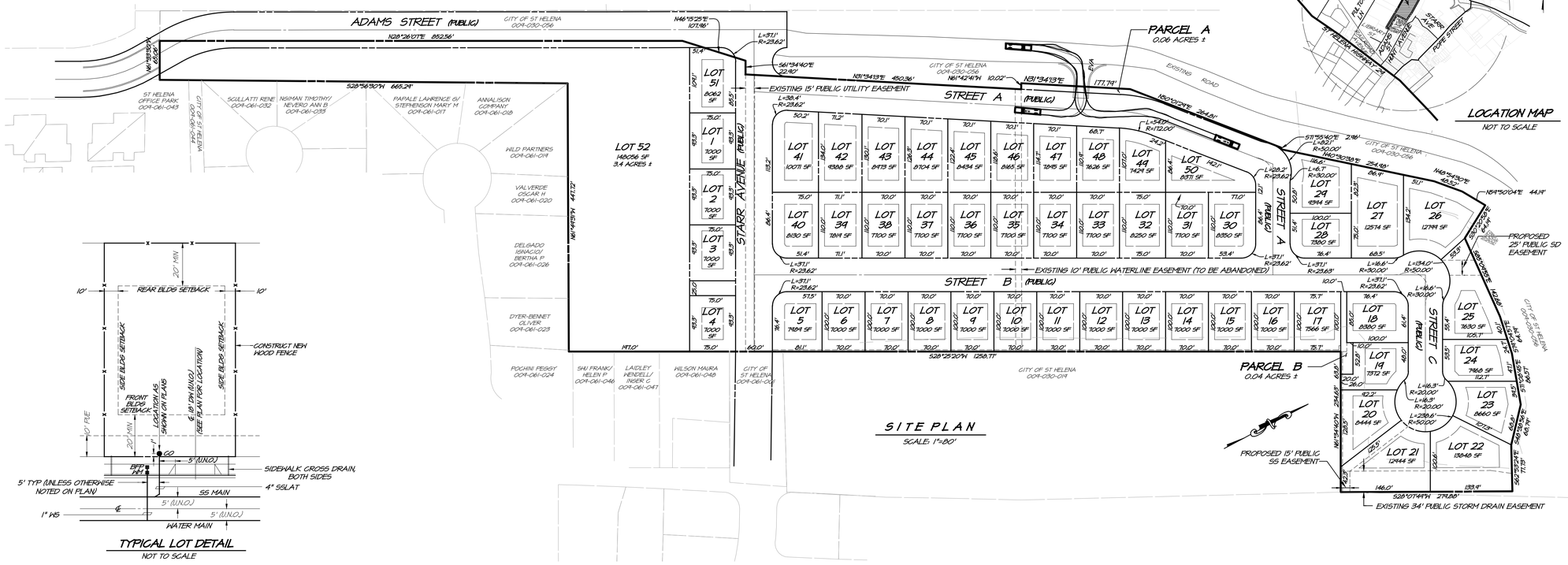
- Adding traffic from the proposed project to existing traffic would have the following impact on the existing location where weekend LOS standards are exceeded:
    - Main Street/Pope Street – Mitchell Drive: Continues to operate with unsatisfactory LOS at LOS F, however, the increase in delay is less than 5.0 seconds (3.7 seconds). Therefore, the project would not exceed the City's impact criteria and would be consistent with the City's LOS policies.
- Based on the LOS results of the Existing plus Project weekday and Saturday peak hour traffic analysis, and the City's impact criteria, the proposed project would be inconsistent with the City's LOS policies, and would require an improvement:
    - Main Street/Pope Street – Mitchell Drive: LOS F during the weekday PM peak hour.
- Adding project traffic to projected future (2040) traffic on local roadways would affect the intersections which already operate below the City's LOS standards on weekdays:
    - Main Street/Pope Street – Mitchell Drive: LOS F in AM and PM peak hours. The proposed project would contribute traffic to this LOS deficiency.
    - Paseo Grand Drive – College Avenue/Pope Street: LOS E in AM peak hour. This intersection would remain unsignalized in the Buildout condition, and would not satisfy the peak hour signal warrant in the AM peak hour. Therefore, this would be consistent with the City's LOS policies.
    - Silverado Trail/Pope Street: LOS E in AM peak hour, and LOS F in the PM peak hour. This intersection would remain unsignalized in the Buildout condition. However, the AM and PM peak hour traffic volumes would satisfy the peak hour signal warrant. The proposed project would contribute traffic to this LOS deficiency.
- Under Saturday Buildout (2040) conditions, the project would add to the following intersections where weekend LOS exceeds City standards:
    - Main Street/Pope Street – Mitchell Drive: LOS F in the weekday and Saturday peak hours. The proposed project would contribute traffic to this LOS deficiency.
    - Silverado Trail/Pope Street: LOS F. This intersection would remain unsignalized in the Buildout condition. However, its Saturday peak hour volume would satisfy the peak hour signal warrant. The proposed project would contribute traffic to this LOS deficiency.
- Based on the LOS results of the Buildout (2040) weekday and Saturday peak hour traffic analysis, and the City's impact criteria, the proposed project would create an LOS deficiency at the following intersections, and would require improvements:
    - Main Street/Pope Street – Mitchell Drive: LOS F during the weekday and Saturday peak hours.
    - Silverado Trail/Pope Street: LOS E during the weekday AM peak hour, LOS F during the weekday PM peak hour and Saturday peak hours. The weekday and Saturday peak hours volumes satisfy peak hour signal warrants.

Recommended Improvements and Conclusion

- The traffic study recommends several improvements to address existing+project and future (2040) traffic impacts:
    - Implement the following improvement to the intersection of Main Street/Pope Street – Mitchell Drive:

      • Westbound right turn phase to allow for overlapping turns. This will allow for permitted right turns occurring during a red light and also a protected right-turn phase occurring turning a non-conflicting movement, such as the southbound left-turn protected phase.
    - Implement the following improvement to the intersection of Main Street/Pope Street – Mitchell Drive:
        - Construction of one or more of the various roadway connections recommended in the St. Helena General Plan Update EIR (discussed in detail in Section 3.13 – Transportation and Traffic). These connections would improve overall LOS in the Buildout (2040) scenario:
        - Connection 2A: College Avenue extension to Mills Lane (may require realignment of Mills Lane to meet Main Street/Grayson Avenue intersection).
        - Connection 3: Oak Avenue extension from Mitchell Drive to Grayson Avenue.
        - Connection 2B, Connection 2C, Connection 5B, or a combination of Connections 1, 4 and 5A may provide congestion relief to Main Street/Pope Street-Mitchell Drive, but these improvements have additional considerations related to neighborhood traffic volumes and costs related to crossings of the Napa River.
    - Implement the following improvement to the intersection of Silverado Trail/Pope Street:
        - Installation of a traffic signal at the intersection, as well as, at the adjacent, closely-spaced intersection Silverado Trail/Howell Mountain Road. This intersection is recommended for signalization according to the analysis in the St. Helena General Plan Update EIR. With a traffic signal in-place, this intersection would operate with satisfactory LOS.
- If these improvements are implemented, the intersections would operate at acceptable levels.

TENTATIVE MAP
HUNTER SUBDIVISION
ST HELENA CALIFORNIA



LOCATION MAP
NOT TO SCALE

SITE PLAN
SCALE: 1"=80'

TYPICAL LOT DETAIL
NOT TO SCALE

SYMBOL LEGEND

EXISTING		PROPOSED
EDGE OF PAVEMENT		EDGE OF PAVEMENT
EX SD — STORM DRAIN LINE	SD	STORM DRAIN LINE
EX SS — SANITARY SEWER LINE	SS	SANITARY SEWER LINE
EX W — WATER LINE	W	WATER SERVICE LINE
EX SSMH — SANITARY SEWER MANHOLE	SSMH	SANITARY SEWER MANHOLE
EX SDMH — STORM DRAIN MANHOLE	SDMH	STD STORM DRAIN MANHOLE
BANK/SLOPE		2:1 SLOPE, UNLESS OTHERWISE SHOWN
CURB AND GUTTER		STD CURB AND GUTTER
CATCH BASIN	CB 100	STD CATCH BASIN
SIDEWALK		STD SIDEWALK
EX FH — FIRE HYDRANT	FH	STD FIRE HYDRANT
EX WV — WATER VALVE	WV	STD WATER VALVE
EX SL — STREET LIGHT	SL	STREET LIGHT
CLEANOUT		DROP INLET
WATER METER AND BACKFLOW PREVENTION DEVICE	DI	RIGHT OF WAY / PROPERTY LINE
TREE TO REMAIN		RETAINING WALL
FENCE		100-YEAR OVERLAND RELEASE PATH
JOINT POLE W/ GUY		EXISTING RUNOFF DIRECTION
DRIVEWAY		STANDARD DRIVEWAY
235 — CONTOUR LINE		REMOVE EXISTING TREE
+231.5 — SPOT ELEVATION		
EX OHE — OVERHEAD ELECTRIC		

ABBREVIATIONS

AB	AGGREGATE BASE	NW	NORTHWEST
AC	ASPHALT CONCRETE	OHE	OVERHEAD ELECTRIC
BVC	BEGINNING OF VERTICAL CURVE	PL	PROPERTY LINE
CB	CATCH BASIN	PUE	PUBLIC UTILITY EASEMENT
CL	CLASS	PVI	POINT OF VERTICAL INTERSECTION
℄	CENTERLINE	R	RADIUS
CO	CLEANOUT	RCE	REGISTERED CIVIL ENGINEER
CONC	CONCRETE	ROW	RIGHT OF WAY LINE
DI	DROP INLET	S	SLOPE / SOUTH
E	EAST	SD	STORM DRAIN
ELEV	ELEVATION	SDCB	STORM DRAIN CATCH BASIN
EP	EDGE OF PAVEMENT	SDJB	STORM DRAIN JUNCTION BOX
EVC	END OF VERTICAL CURVE	SDMH	STORM DRAIN MANHOLE
EX	EXISTING	SL	STREET LIGHT
EXP	EXPIRES	SS	SANITARY SEWER
FC	FACE OF CURB	SSLAT	SANITARY SEWER LATERAL
FF	FINISH FLOOR ELEVATION	SQ FT	SQUARE FEET
FG	FINISH GRADE	SSE	SANITARY SEWER EASEMENT
FH	FIRE HYDRANT	SSMH	SANITARY SEWER MANHOLE
FL	FLOW LINE	STA	STATION
GB	GRADE BREAK	STD	STANDARD
GF	GARAGE FLOOR ELEVATION	SW	SIDEWALK
GNV	GROUND, NOT VISIBLE	T	TRASH ENCLOSURE
GP	GUEST PARKING	TC	TOP OF CURB ELEVATION
HP	HIGH POINT	TW	TOP OF WALL ELEVATION
INV	INVERT ELEVATION	TYP	TYPICAL
JP	JOINT POLE	VC	VERTICAL CURVE
L	LENGTH	W	WATER / WEST
LF	LINEAL FOOT/FEET	WM	WATER METER
LP	LOW POINT	WUE	WATER UTILITY EASEMENT
MAX	MAXIMUM	WV	WATER VALVE
N	NORTH		
NCR	NAPA COUNTY RECORDS		
NO	NUMBER		

SHEET INDEX

TM1	COVER SHEET
TM2	EXISTING CONDITIONS
TM3	GRADING PLAN
TM4	GRADING SECTIONS & DETAILS
TM5	UTILITY PLAN

BASIS OF BEARINGS:
THE BEARING OF N28°25'20"E BETWEEN THE FOUND MONUMENTS AS SHOWN ON 26 RS 64, MAP NO. 4142

PROJECT BENCHMARK:
USCGS NO. 410 BRASS DISK ON NORTH WALL OF VASCONI PHARMACY.

ELEVATION 256.58' NGVD 1424

GRAPHIC SCALE
80 0 80 160
(IN FEET)
1 inch = 80 FT

NOTES:

1. ALL FEATURES SHOWN HEREON REPRESENT CONDITIONS OF THE PROJECT AREA AS COMPILED FROM AN AERIAL SURVEY CONDUCTED JANUARY 4, 2010 BY AEROMETRICS SURVEYS AND A SUPPLEMENTAL FIELD SURVEY BY RSA+ IN JUNE OF 2018. NO ATTEMPT HAS BEEN MADE TO DETERMINE THE EXTENT OR EXISTENCE OF UNDERGROUND UTILITIES OR OTHER FEATURES NOT SURFACE VISIBLE, EXCEPT AS SHOWN HEREON.
2. BOUNDARY INFORMATION SHOWN IS FROM A BOUNDARY SURVEY PERFORMED JULY 2010 BY BROOKS AND ASSOCIATES.
3. THE CITY OF ST HELENA COMPREHENSIVE FLOOD PROTECTION PROJECT IS COMPLETE. SUBJECT PROPERTY IS NO LONGER SUBJECT TO INUNDATION BY FLOOD WATERS AND DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
4. THIS MAP SHOWS ALL CONTIGUOUS PROPERTY OF THE OWNERS.
5. THERE ARE NO EXISTING STRUCTURES ON THE SUBJECT PROPERTIES.
6. ALL EXISTING AND PROPOSED EASEMENTS ARE SHOWN.
7. ALL EXISTING AND PROPOSED UTILITIES ARE SHOWN. EXISTING UNDERGROUND UTILITIES AS SHOWN WERE DRAWN FROM RECORD SOURCES ONLY. BURIED PIPES WERE NOT VERIFIED, NOR WAS ANY SUBSURFACE EXPLORATION CONDUCTED.
8. ALL EXISTING UTILITY POLES AND OVERHEAD LINES ARE SHOWN.
9. CONTOUR LINES AS SHOWN ARE AT 1 FOOT INTERVALS.
10. THERE IS NO PHASING PLANNED FOR THIS PROJECT.

GENERAL NOTES

OWNER:	DENNIS HUNTER 900 COLLEGE AVENUE SANTA ROSA, CALIFORNIA 95404 (707) 574-0120
DEVELOPER:	BEN AND KELLY VANZUTPHEN 231 LORRAINE COURT HEALDSBURG, CALIFORNIA 95448 (707) 431-8582
ARCHITECT:	FARRELL-FABER AND ASSOCIATES 1022 MENDOCINO AVENUE SANTA ROSA, CALIFORNIA 95401 (707) 574-3811
CIVIL ENGINEER:	RSA+ 1515 FOURTH STREET NAPA, CALIFORNIA 94559 (707) 252-8601
PARCEL NO:	APN 004-030-057
PARCEL AREA:	16.412 ACRES
EXISTING USE:	VACANT/AGRICULTURE
PROPOSED USE:	RESIDENTIAL
WATER:	CITY OF ST HELENA
SEWER:	CITY OF ST HELENA
EXISTING ZONING:	MR (MEDIUM DENSITY RESIDENTIAL)
PROPOSED ZONING:	MR (MEDIUM DENSITY RESIDENTIAL)
GENERAL PLAN DESIGNATION:	MEDIUM DENSITY RESIDENTIAL

PRELIMINARY-NOT FOR CONSTRUCTION

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ST HELENA
COVER SHEET
HUNTER SUBDIVISION
CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — No. 73257 — EXP. 12.31.2022 — CIVIL — STATE OF CALIFORNIA

DATE	APRIL 30, 2021
DRAWN	EM
DESIGNED	BY
CHECKED	AS
JOB NO.	1100417.0

SHEET NO.
TM1
1 OF 5 SHEETS

NO.	DATE	REVISIONS	BY

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NO.	DATE	REVISIONS	APPD BY

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1211 LINCOLN AVENUE, SUITE J
SAN RAFAEL, CA 94901
(415) 453-1454
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CALIFORNIA

ST HELENA

EXISTING HUNTER SUBDIVISION

REGISTERED PROFESSIONAL ENGINEER
No. 73257
Exp. 3-31-2022
CIVIL
STATE OF CALIFORNIA

DATE: JUL 30, 2021
DRAWN: CEL
DESIGNED: ETK
CHECKED: JAS
JOB NO.: 19004.1.0

SHEET NO.
TM2
2 OF 5 SHEETS

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EROSION CONTROL

CONSTRUCTION BMP'S
FIBER ROLLS
STORM DRAIN INLET PROTECTION
STABILIZED CONSTRUCTION ENTRANCE/EXIT
OUTDOOR MATERIAL STORAGE AREAS
CONCRETE WASTE MANAGEMENT
PROPER VEHICLE AND EQUIPMENT MAINTENANCE
SLOPE PROTECTION

POST-CONSTRUCTION BMP'S
INLET LABELS "DRAINS TO RIVER"
PRIVATE STREET SWEEPING
DOWNSPOUTS TO LANDSCAPE SWALES
VEGETATED SWALES
HOMEOWNER EDUCATION ON STORM WATER POLLUTION PREVENTION
HYDRODYNAMIC OIL, WATER & SOLID SEPARATOR

NOTE:
THOSE AREAS DRAINING INTO THE EXISTING STORM DRAIN SYSTEM (DIRECTLY DISCHARGING TO THE NAPA RIVER) WILL BE TREATED BY HYDRODYNAMIC SEPARATORS PRIOR TO ENTERING INTO THE EXISTING SYSTEM. THE REMAINING SITE WILL DRAIN INTO THE DETENTION POND (PER THE CITY OF ST HELENA COMPREHENSIVE FLOOD PROTECTION PROJECT) WHICH WILL TREAT THE RUNOFF PRIOR TO BEING DISCHARGED INTO THE NAPA RIVER.

LEGEND

- CURB INLET SEDIMENT BARRIER (1/4)
- FIBER ROLL SEDIMENT BARRIER (2/4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED
- (A) = TYPE 'A' LOT GRADING (SEE SHEET TM4 FOR DETAILS)
- EX 100 YEAR OVERLAND RELIEF ROUTE

APPROXIMATE RAW EARTHWORK QUANTITIES*

CUT	FILL
10,202 CY	24,350 CY

* DOES NOT INCLUDE COMPACTION AND CONSOLIDATION LOSSES OR TRENCH, PAD OR FOUNDATION SPOILS.

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 inch = 50 FT

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ST HELENA CALIFORNIA
GRADING PLAN
HUNTER SUBDIVISION

RS+ | CONSULTING CIVIL ENGINEERS + SURVEYORS
252 LOCUST AVENUE, ST HELENA, CA 94574 (707) 963-3070

REGISTERED PROFESSIONAL ENGINEER — No. 73257 — CIVIL — STATE OF CALIFORNIA

DATE APRIL 30, 2021
DRAWN DEL
DESIGNED BTF
CHECKED
JOB NO. 19-0047
SHEET NO. TM3
3 OF 5 SHEETS

NO	DATE	BY
1	4/30/21	DEL

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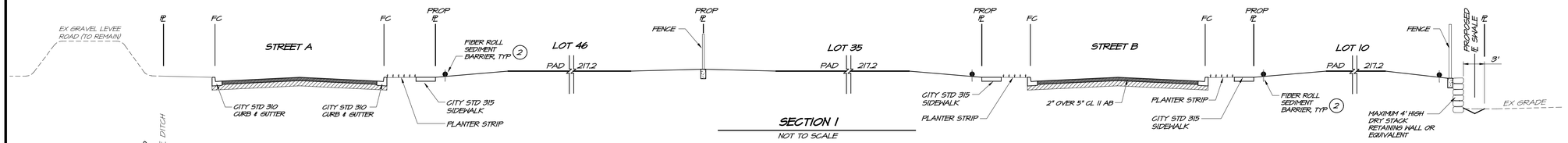

SECTION 1
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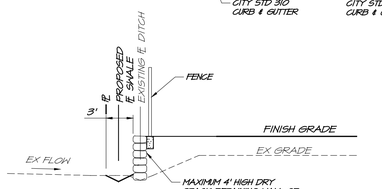
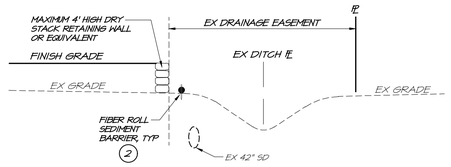
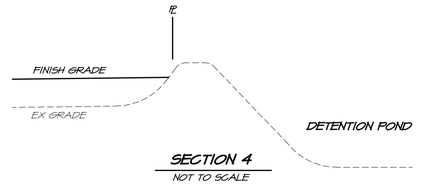


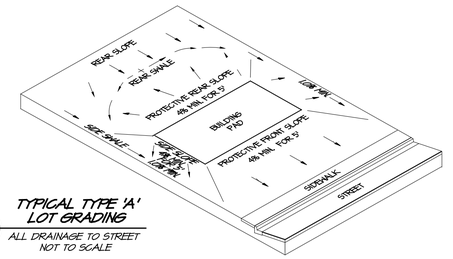
SECTION 2
NOT TO SCALE



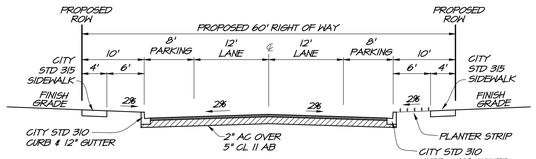
SECTION 3
NOT TO SCALE



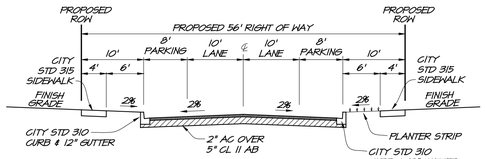
SECTION 4
NOT TO SCALE



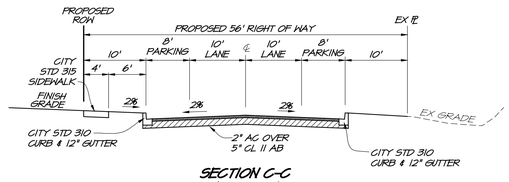
A TYPICAL TYPE 'A' LOT GRADING
ALL DRAINAGE TO STREET
NOT TO SCALE



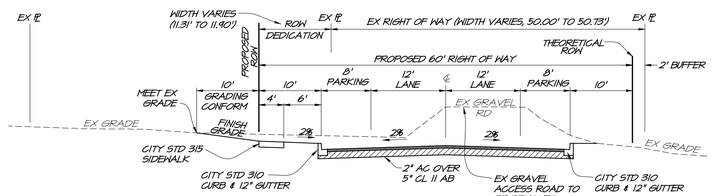
SECTION A-A
(STARR AVENUE)
NOT TO SCALE



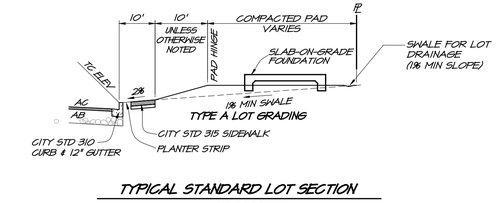
SECTION B-B
(STREET 'B')
NOT TO SCALE



SECTION C-C
(STREET 'A')
NOT TO SCALE

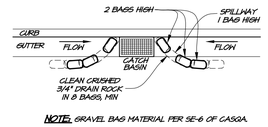


SECTION D-D
(ADAMS STREET)
NOT TO SCALE

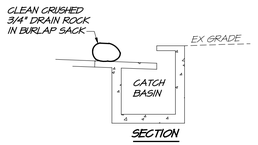


TYPE A LOT GRADING

TYPICAL STANDARD LOT SECTION
NOT TO SCALE

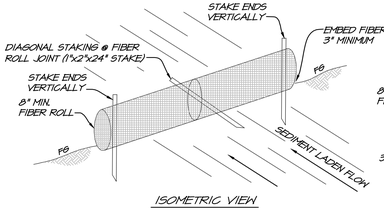


NOTE: GRAVEL BAG MATERIAL PER SE-6 OF CASQA.

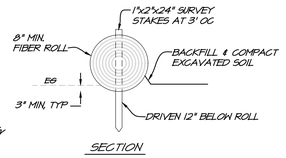


SECTION

1 CURB INLET SEDIMENT BARRIER
NOT TO SCALE



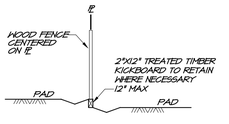
ISOMETRIC VIEW



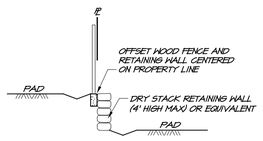
SECTION

NOTE:
PLACE FIBER ROLLS INTO THE KEY TRENCH AND STAKE ON BOTH SIDES OF THE ROLL WITHIN 6 FEET OF EACH END AND THEN 4 FEET WITH 1" x 2" STAKES OR AS SUGGESTED BY MANUFACTURER.

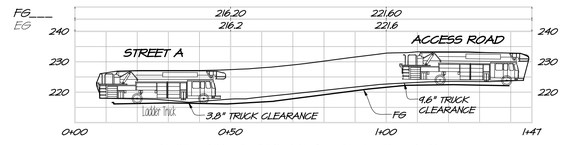
2 FIBER ROLL SEDIMENT BARRIER
RSA EC0000-04 NOT TO SCALE



TYPICAL SIDE YARD GRADING
NOT TO SCALE



TYPICAL SIDE YARD GRADING WITH RETAINING WALL
NOT TO SCALE



EMERGENCY VEHICLE ACCESS SECTION
SCALE: 1" = 20'

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1234 MAIN STREET, SUITE 101, ANYTOWN, CA 95000
RSA CONSULTING CIVIL ENGINEERS + SURVEYORS, Inc.

NO.	DATE	BY
1	04/30/2023	ABC

CALIFORNIA
ST HELENA
HUNTER'S SUBDIVISION
GRADING SECTIONS

PROFESSIONAL ENGINEER — No. 73267 — Exp. 12-31-2023 — CIVIL — STATE OF CALIFORNIA

DATE 04/30/2023
DRAWN CDC
DESIGNED JLP
CHECKED JLP
JOB NO. 21-0123

SHEET NO.
TM 04
4 OF 5 SHEETS

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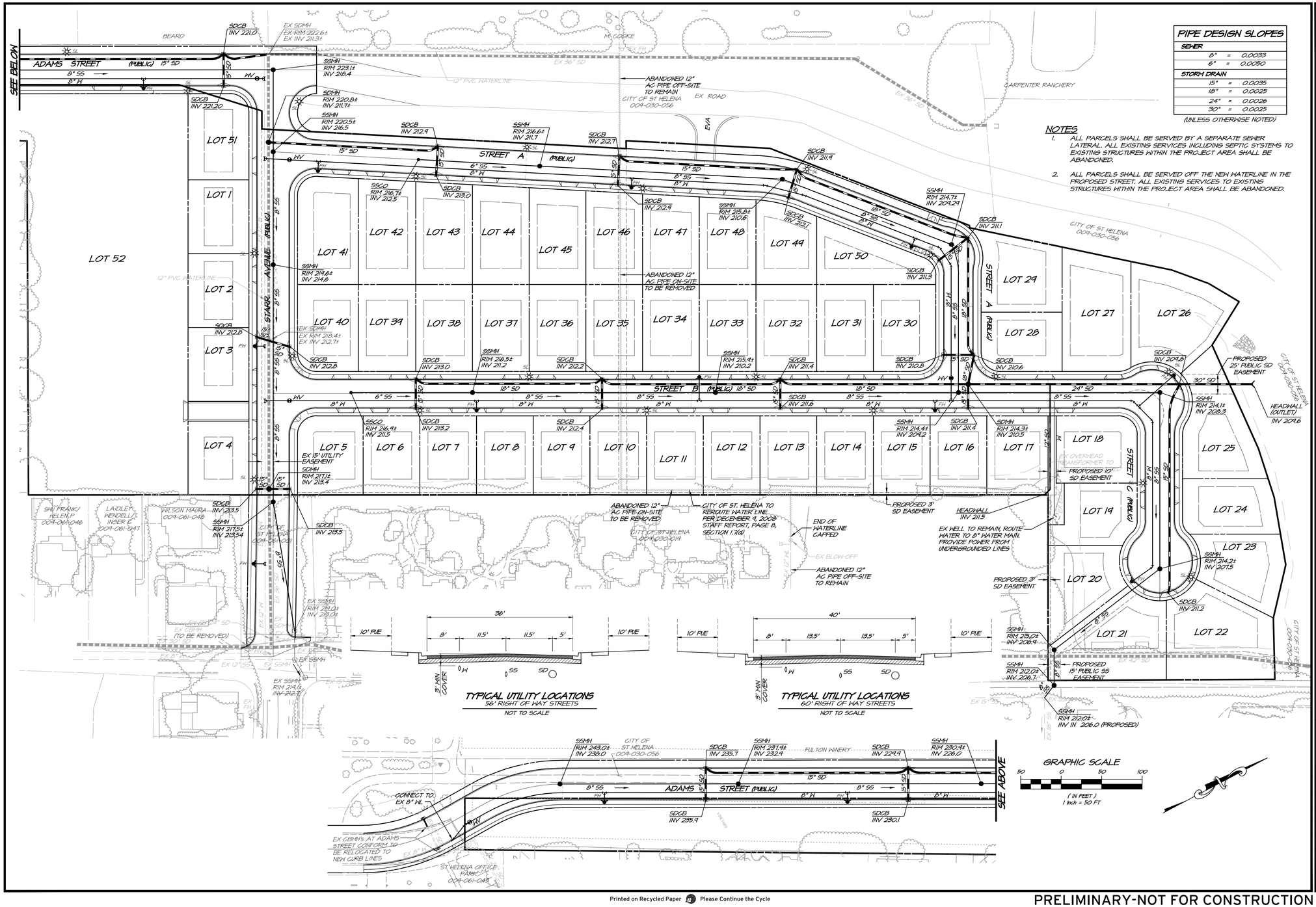
PIPE DESIGN SLOPES

SEWER	
8"	= 0.0033
6"	= 0.0050
STORM DRAIN	
15"	= 0.0035
18"	= 0.0025
24"	= 0.0026
30"	= 0.0025

(UNLESS OTHERWISE NOTED)

NOTES

1. ALL PARCELS SHALL BE SERVED BY A SEPARATE SEWER LATERAL. ALL EXISTING SERVICES INCLUDING SEPTIC SYSTEMS TO EXISTING STRUCTURES WITHIN THE PROJECT AREA SHALL BE ABANDONED.
2. ALL PARCELS SHALL BE SERVED OFF THE NEW WATERLINE IN THE PROPOSED STREET. ALL EXISTING SERVICES TO EXISTING STRUCTURES WITHIN THE PROJECT AREA SHALL BE ABANDONED.



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REVISIONS

DATE

NO.

RSA+ CIVIL
1212 LINCOLN AVENUE, SUITE 201
CALISTOGA, CA 94515
707.942.5895 FAX 707.942.5902
RSA+ CONSULTING CIVIL ENGINEERS + SURVEYORS, Inc.

ST HELENA
UTILITY PLAN
HUNTER SUBDIVISION
CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
No. 73257
EXP. 12.31.2020
CIVIL
STATE OF CALIFORNIA

DATE 04/30/2021
DRAWN EFL
DESIGNED EFF
CHECKED
JOB NO. 1200.01

SHEET NO.
TM5
5 OF 5 SHEETS

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Page 2871 of 3230

Agenda Item #5.1.

-----Original Message-----
From: Judy Boyle <judysb@sbcglobal.net>
Sent: Sunday, October 23, 2022 4:39 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Extension

This is a request for an extension for the meeting scheduled for 11/1/22 to discuss the Hunter development. The document is over 2000 pages long. Judy Boyle

Sent from my iPhone

From: Sherri Kelly <sherrikelly1192@gmail.com>
Sent: Saturday, October 22, 2022 10:51 AM
To: Autumn Anderson <AAnderson@cityofsthelena.org>; Rosaura Segura <adam.rotello@gmail.com>; Christopher Warner <Christopher.Warner@cityofsthelena.org>; Marika Rothfeld <mrothfeld@cityofsthelena.org>; John Ponte <JPonte@cityofsthelena.org>; Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>; Paul Dohring <PDohring@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>; Lester Hardy <LHardy@cityofsthelena.org>; Eric Hall <EHall@cityofsthelena.org>
Subject: [External] Hunter Project DEIR responses - were they made public?

Good morning,
I'm writing in response to item 5.1 on the Planning Commission agenda for November 1 regarding the Hunter Project.

There were many questions and concerns brought up in Fall 2021 during the public comment period on the Hunter Project DEIR. I don't recall seeing any responses from the City answering the myriad questions/concerns to the Hunter DEIR, and I thought that was required under CEQA before certification of the final EIR. Given the apparent lack of public response to questions and concerns regarding the Hunter DEIR, how can City staff now

1. "Recommend that the City Council adopt the attached Resolution recommending certification of the Final EIR, approval of the Mitigation Monitoring Program, Findings of Fact and Statement of Overriding Considerations; and
2. Recommend that the City Council adopt the attached Resolution recommending approval the requested Tentative Map No. 2022-001, File #PL10-040 for the Hunter Subdivision project."

Please let me know where and when questions and concerns about the Hunter DEIR will be formally addressed. For your reference, I have attached a letter that I submitted in Fall 2021 in response to the DEIR listing several concerns regarding ***threats to the health, safety and civil rights of existing and future St. Helena residents***, should the Hunter Project be developed as proposed.

In a related issue, when I attempted to access the attachment to the Hunter item on the Planning Commission agenda, it appears to be password protected. It seems to me that the public is entitled to adequate time to access and review these important documents.

I look forward to your response, and thank you for your help on this matter.

Sherri Kelly
1192 Meadowcreek Circle

From: Isobel luria <isobel.luria@gmail.com>
Sent: Sunday, October 23, 2022 12:09 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Extension

Hi Maya,

I have pulled up the FEIR on the Proposed Hunter Project and there is no way I can possibly read the 2849 pages even cursorily by the November 1 meeting. As you know from the numerous comments submitted when the DEIR was made public, many residents of SH are really interested in this project. I am therefore respectfully requesting an extension to be able to fully digest the responses to our comments.

Thank you,

Isobel Luria
1173 Starr Avenue

--
Isobel Luria
Isobel.luria@gmail.com
Mobile: 707-480-3983
Sent from my iPad

-----Original Message-----
From: Elisabeth Alderman <Liz.Alderman@outlook.com>
Sent: Saturday, October 22, 2022 8:25 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project EIR

Hello,

I'm submitting my request to postpone the 11/1 hearing so that I have time to review the extremely lengthy report.

Thank you,

Liz Alderman
702 Hunt Ave

Xinia Gamero

From: Maya DeRosa
Sent: Monday, October 24, 2022 10:45 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Final EIR Hunter Project

Please see attached comment.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Maria Villegas <marrivilla1@comcast.net>
Sent: Monday, October 24, 2022 10:21 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: Re: [External] Final EIR Hunter Project

Thank you for fixing the problem. I noticed the document is over 2000 pages and am requesting an extension given the loss of time to read the document.

Please let me know if this is possible.
Thank you,
Maria

Sent from my iPhone

> On Oct 24, 2022, at 9:27 AM, Maya DeRosa <MDeRosa@cityofsthelena.org> wrote:
>
> Hello Ms. Villegas, I do understand that on Saturday the link was not accessible to the Hunter staff report and files however that afternoon we resolved the privacy setting. I have been checking the link and it continues to work. I am copying it here below for your convenience.
>
>
https://sthelena.civicweb.net/document/68499/Request%20by%20Ben%20and%20Kelly%20Vanzutphen%20to%20subdivid.pdf?handle=A2E3E5827C2F40B1BEB7F942C650D285
>
> Kind regards,
>
>
> MAYA DEROSA, AICP
> COMMUNITY DEVELOPMENT DIRECTOR
> City of St. Helena | Community Development Department
> 1572 Railroad Avenue | St. Helena, CA 94574

> Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning
>
>
> -----Original Message-----
> From: MariaVillegas <marrivilla1@comcast.net>
> Sent: Sunday, October 23, 2022 7:26 PM
> To: Maya DeRosa <MDeRosa@cityofsthelena.org>
> Subject: [External] Final EIR Hunter Project
>
> Ms. DeRosa,
> The Planning Commissioners meeting scheduled for November 1, 2022 with the agenda item for the Vanzuhptens has a link which should allow the public to access the FEIR. When I clicked on the link it led me to a sign in page. I was unable to access the document. I have tried to access the document again today however, the link is no longer on the agenda item. For this reason I am asking for one, the link be provided in order to access the document and two, I'm requesting an extension in order to allow me to view and read the document.
> Thank you,
> Maria Villegas
>
> Sent from my iPad

From: tom corkill <tkc940elbow@gmail.com>
Sent: Monday, October 24, 2022 9:32 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Vanzutphen project

I am requesting that there be an extension on the above referenced hearing as there has been totally insufficient time to review the 2849 page report. I am a resident of Vineyard Valley.

--
Tom Corkill

From: minna <minnaw@sonic.net>
Sent: Monday, October 24, 2022 10:37 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] extention

we need extra time to read the proposed report submitted regarding the Hunter project

Minna Williams, VV

From: Marina Lavagnino <marinalavagnino@gmail.com>
Date: October 24, 2022 at 5:56:18 PM PDT
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Hello Maya.

I am one of the individuals who spoke at both comment zoom meetings last fall, and also turned in written comments. I only learned of the Final EIR yesterday, and was able to access the report late last night. I want time to review the document and consult with other neighbors and interested parties, to be prepared before the public meeting to vote on the project. November 1st is way too soon for that vote.

In a brief look, I can quickly see responses to the issues that were raised that seem inaccurate. If the reasoning in the final EIR is sound, then a delay to get give us a chance to understand the document should not be a problem.

Kind regards-

Marina Lavagnino
15 Del Rio Ct.

508-612-8999

Xinia Gamero

From: Elizabeth Green <green05@sbcglobal.net>
Sent: Tuesday, October 25, 2022 9:53 AM
To: Public Comment
Subject: [External] Hunter Project

We live in Vineyard Valley and we are very concerned about this housing development. It is right behind
the end of our park. These are just a few of the concerns we have.

Major concerns:

*WATER: We don't have enough now for current residents.

*all the additional cars from new residents

*all the additional traffic

*evacuation issues: Vineyard Valley is supposed to use the road up on the levee as an additional
evacuation route, but this would be eliminated. And *where* would all the additional residents
living there use as an evacuate route? On Main St., south on 29? All of St. Helena will be using that ONE
and ONLY way out in the event of a wildfire.

*2+ years of dump trucks, lumber trucks, and all other types of construction trucks going up and
down Main St. and turning right on Adams. Dirt, noise, etc., due to ongoing construction.

*Major concerns about the safety of the levee and building on top of it.

*A major flood in the future and the safety of Vineyard Valley.

PLEASE STOP THIS PROJECT FROM GOING FORWARD. IT HAS MAJOR RAMIFICATIONS FOR ALL OF ST. HELENA.

Respectively,

Rodney & Elizabeth Green

From: Sherri Kelly <sherrikelly1192@gmail.com>
Sent: Tuesday, October 25, 2022 10:00 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Autumn Anderson <AAnderson@cityofsthelena.org>; John Ponte <JPonte@cityofsthelena.org>; Christopher Warner <Christopher.Warner@cityofsthelena.org>; Rosaura Segura <adam.rotello@gmail.com>; Marika Rothfeld <mrothfeld@cityofsthelena.org>
Subject: [External] Request to continue PC item 5.1

Good morning Maya,
Thanks for your prompt assistance on making the attachment to item 5.1 for the upcoming 11/1/22 Planning Commission meeting accessible. I saw the password protection was removed and was able to open the link to access the file.

I now see that the document is 2849 pages long. I believe it is important for the public to have time to thoroughly read and process the information in order to submit well informed and timely responses during the public comment period prior to the 11/1 meeting. The Planning Commission meeting is a week away at this point. Please accept this message as my formal request for a continuance on agenda item 5.1 to allow members of the public to have adequate opportunity to read and respond to the information in the agenda attachment file number PL10-040 and TM 2022-001 and the Hunter Project Final EIR incorporated therein.

Thanks for your help on this.
Sherri Kelly
1192 Meadowcreek

Xinia Gamero

From: sherry powell <sherry@napashakes.org>
Sent: Tuesday, October 25, 2022 1:42 PM
To: Public Comment
Subject: [External] Hunter project

To Whom it May Concern,
This project should NOT be considered for many reasons, but the primary reason is fire and evacuation concerns. There is a water shortage in St. Helena for residents without building more dwellings and the evacuation routes are already stretched with the residents and housing on Pope and adjoining streets. Please do not allow this application process to go any further.
Thank you for your consideration.
Michael Powell
4 La Canada Ct.
St. Helena, CA 94574

Xinia Gamero

From: Maya DeRosa
Sent: Wednesday, October 26, 2022 1:11 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Request to postpone the meeting on November 1

Follow Up Flag: Follow up
Flag Status: Flagged

Please add to the public comment for Hunter.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

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From: Mary Alice Stielau <mastielau@gmail.com>
Sent: Wednesday, October 26, 2022 1:09 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; Autumn Anderson <AAnderson@cityofsthelena.org>; John Ponte <JPonte@cityofsthelena.org>; Christopher Warner <Christopher.Warner@cityofsthelena.org>; Rosaura Segura <adam.rotello@gmail.com>; Marika Rothfeld <mrothfeld@cityofsthelena.org>
Cc: Geoff Ellsworth <GEllsworth@cityofsthelena.org>; Paul Dohring <PDohring@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>; Lester Hardy <LHardy@cityofsthelena.org>; Eric Hall <EHall@cityofsthelena.org>
Subject: [External] Request to postpone the meeting on November 1

Please accept this message as my formal request for a continuance on agenda item 5.1 to allow myself and other members of the public to have adequate opportunity to read and respond to the information in the agenda attachment file number PL10-040 and TM 2022-001 and the Hunter Project Final EIR.

Thank you,

Mary Alice Stielau

18 Los Robles Ct, St Helena

Xinia Gamero

From: Maya DeRosa
Sent: Wednesday, October 26, 2022 9:22 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunt development EIR

Please see public comment below for 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Ben Alderman <benjamin.alderman@gmail.com>
Sent: Wednesday, October 26, 2022 4:01 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunt development EIR

Please can we have an extension on reviewing the EIR for the Hunt development. A 3000 page document for a 100 housing unit project in a flood plain deserves full and proper review.

Regards,

Ben

Ben Alderman
347-461-1594

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 9:05 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Library Development - Review Extension

Please see attached public comment for 11/1.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: William Odegard (C) <w_odegard@apple.com>
Sent: Wednesday, October 26, 2022 6:59 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Cc: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Library Development - Review Extension

To Whom It May Concern:

Regarding the proposed residential development in St Helena (east of the Library along the floodplain), I am formally requesting an extension from the City Clerk to provide more time to review the 3,000 page document.

Thank you in advance for your support.

Kind Regards,
William Odegard

William Odegard
Social Strategist
310 849 5078

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 9:05 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Request for extension to review Hunter EIR

Please see public comment for 11/1 hearing.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Nicole Garriott <nicole.garriott@gmail.com>
Sent: Wednesday, October 26, 2022 5:42 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Cc: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Request for extension to review Hunter EIR

To whom it may concern-

May we kindly request an extended time to review the EIR and submit comment for the Hunter Subdivision project?

We were disappointed to have only a little over a week's notice from receiving the letter regarding the public hearing on Nov 1. As members of the local wine industry we are still in the height of busy season and will not be able to attend. Nor do we have enough time to review the EIR in the given timeframe.

Thank you for your consideration,
Nicole & Scott Dale
1326 Monte Vista Ave.

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 9:05 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Project Report/ Timeline

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Dawn Leininger <onetapeone@comcast.net>
Sent: Wednesday, October 26, 2022 3:47 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project Report/ Timeline

Ms. DeRosa,
I was dismayed to see the Hunter Project Reports length at 2849 pages was being decided next Tuesday. I urge you to move the meeting to a future date so that the community can read and evaluate the latest plan. It sounds like a large project with many implications to the west side of St. Helena.
Thank you,
Dawn Leininger

Sent from my iPad

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 9:05 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] EIR Review

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Joyce Armington <green.moma@gmail.com>
Sent: Wednesday, October 26, 2022 4:10 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Elisabeth Alderman <liz.alderman@outlook.com>; david.armington@hotmail.com
Subject: [External] EIR Review

As residents of Vineyard Valley, we are directly affected by the proposed development. We request that you allow additional time for us to study the documents before hearings occur.

Thanks for your consideration.

Joyce Armington
6 Del Monte Court
Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 9:18 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Final EIR extension request.

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

From: Christopher Smith <christopher.smith777@gmail.com>
Sent: Thursday, October 27, 2022 7:46 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Final EIR extension request.

Kindly provide extension on the Final EIR due to the length of the document which exceeds 2000 pages so that the citizens have time to review.
Thanks for your consideration.
Chris Smith

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 10:53 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Extension on 11/1 Hunter Project Hearing

Please see comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Alyson Nelson <alyson.heller@gmail.com>
Sent: Thursday, October 27, 2022 10:14 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Extension on 11/1 Hunter Project Hearing

Hello,

I'd like to ask for an extension on the 11/1 Hunter Project hearing so that the community has time to read the environmental impact report (which is 3k pages and was only shared on Saturday!).

Sincerely,
Alyson Nelson
(1695 Sylvaner Ave)

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 6:58 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Request an extension

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: sherry powell <sherry@napashakes.org>
Sent: Thursday, October 27, 2022 3:41 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Request an extension

To whom it may concern,
We are requesting the board give an extension to throughly go over the 2800 page report, the Final EIR. This is a very important decision for our town and the environment and I hope you will consider the extension.
Thank you for your time.
Sherry Powell
4 La Canada Ct
St Helena
510-220-2621

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 6:58 PM
To: Xinia Gamero
Cc: Cindy Tzafopoulos; Eric Norris
Subject: FW: [External] Hunter Subdivision

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Vivian Robison <vivian.robison@gmail.com>
Sent: Thursday, October 27, 2022 3:33 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Subdivision

Please postpone hearing and voting on the proposed Hunter Subdivision scheduled for November 1, 2022 as we would like more time to study the 2,800+ page FEIR. We are residents of Vineyard Valley Mobile Home Park and will be directly affected by this housing development.

Respectfully,
Vivian Robison
Kenneth Robison
35 Redondo Ct, St Helena CA
cell 707 337-9352

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 7:05 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Request delay of Hunter review in PC

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: tim@nieman.org <tim@nieman.org>
Sent: Thursday, October 27, 2022 2:34 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>; Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Request delay of Hunter review in PC

Hi Cindy,

I'd like to request that this item gets an extension. The EIR is way too long to expect people to read through it in such a short time.
That includes trying to track down the maintenance records I've been asking for and reviewing those before the Planning Commission. All of this takes time and we have been given little of it to perform an adequate review of such an important decision.

Thanks,
Tim

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 7:06 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Project

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: James Wayson <jwandms@pacbell.net>
Sent: Thursday, October 27, 2022 6:56 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Please extend the timeline to review the Final EIR.

Marianne Sylvia and James Wayson
8 Del Rio Ct. Saint Helena

From: Margaret Norton <mmnorton1@earthlink.net>
Sent: Thursday, October 27, 2022 2:29 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] extension of time to review the documents Final EIR (FEIR)

Dear Maya,
I am a resident of St Helena . I am requesting an extension on time to review the 2800 plus pages of the final EIR. this matter requires all our involvement and we need a sufficient amount of time to review.
it would be helpful to also understand how we can add additional water requirements for the city when we already get surcharges and the front page of the ST Helena paper is indicating the current water infrastructure needs significant work.

2022 | sthelenastar.com | Published in the Heart of Napa Valley Since 1874

'Urgent' need to save water

Pump failure reduces water supply

JESSE DUARTE
jduarte@sthelenastar.com

St. Helenans were notified Thursday of an "urgent need to curtail water use" after the failure of one of the city's two groundwater wells.

A pump and motor for one of

regards,
Margaret Norton and Tom Nixon
Sent from my iPad

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 7:12 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Subdivision

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: M Siobal <msiobal@gmail.com>
Sent: Thursday, October 27, 2022 2:20 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>; Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision

Madams,

As a Vineyard Valley home owner I urgently request an extension of time to review the Final EIR for this proposed project. Recently released, this document which is over 2800 pages long, will require additional time to explore before the November 1st public hearing. The potential adverse impacts on the residents of Vineyard Valley and surrounding communities of Saint Helena need to be seriously considered.

Mark Siobal
20 Los Robles Ct
Saint Helena CA 94575

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 7:16 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: Extend Review time for Final EIR

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Martha Angus <martha@marthaangus.com>
Sent: Thursday, October 27, 2022 1:18 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Extend Review time for Final EIR

Hi Maria,
In light of the very lengthy report I need additional time to review.
Many thx,
Martha Angus

Sent from my iPhone
Martha Angus

415-728-4961

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 7:16 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Project

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Audrey Ward <audrey3574@gmail.com>
Sent: Thursday, October 27, 2022 1:15 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Ms deRosa,

Additional time is required to read the FEIR document; please use you influence to affect this positively.
Thank you,
Audrey Ward
Vineyard Valley
510.508.3574

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 7:17 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Subdivision FEIR

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Gary Crosman <gcrosman9@gmail.com>
Sent: Thursday, October 27, 2022 1:11 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision FEIR

Dear Maya,
Please allow an extension of the time allowed for review of the FEIR for the Hunter Subdivision. The document is 2800 pages long and will take some time to read through.
I live at 5 Del Campo Ct. in Vineyard Valley and this project will have an important impact on my living conditions.
Thank you,
Gary Crosman

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 7:18 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Extend the time period o review FEIR!

Please see public comment below .

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

From: Madeline DeMarco <madelinedemarco@yahoo.com>
Sent: Thursday, October 27, 2022 1:09 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Extend the time period o review FEIR!

Dear Maya,
Please allow us more time to review the FEIR as it is 2800 pages and we need more time to read it. I live in Vineyard Valley so this issue directly impacts me so I want to fully understand this report.
Thank you,
Madeline DeMarco
5 Del Campo Ct.
St. Helena, Ca.

Sent from Yahoo Mail for iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Thursday, October 27, 2022 7:20 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: Hunter Subdivision Urgent Request

Please see comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Nannette Heye <nheye@hotmail.com>
Sent: Thursday, October 27, 2022 12:59 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Subdivision Urgent Request

To: mderosa@cityofsthelena.org
Cc: ctzafopoulos@cityofsthelena.org
Subject: Hunter Subdivision Urgent Request

Dear Maya and Cindy,

We are formally requesting a time extension in order to review the final **Hunter Subdivision EIR 2800 page report** before the Nov.1st deadline to comment on the Hunter Subdivision.

My husband and I own a home in Vineyard Valley Senior mobile home park and are directly effected by the Hunter Subdivision development.

There is not enough time to review this 2800-page report by November 1, 2022 and, as such, that date is a ridiculously unattainable/unreachable reading goal not to mention time to process and organize our thoughts!

Thank you,
James and Nannette Heye
5 Laguna Seca Court
St Helena, Ca. 94574
(206) 909-5811

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 8:24 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: Extension

Please see public comment below for 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Anne Offord <anneofford@hotmail.com>
Sent: Friday, October 28, 2022 8:02 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Extension

Request an extension to review the EIR report for the said Hunter project

Anne Offord
Vineyard Valley resident

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 9:00 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Extension for FEIR

Please see comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: C. Echols <cechols47@gmail.com>
Sent: Thursday, October 27, 2022 12:47 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Extension for FEIR

This document is extensive. This project greatly affects Vineyard Valley residents, especially those of us in the back.

Request extension to review document.

Thank you

Chris Echols
11 Del Rio Court

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 9:07 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Project EIR and Staff report for November Planning Commission meeting

Please see public comment below for the 11/1 meeting.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Pat Dell <priscillajdell@gmail.com>
Sent: Thursday, October 27, 2022 12:37 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project EIR and Staff report for November Planning Commission meeting

Dear Planning Director DeRosa, You have asked of the residents of the city of St. Helena an herculean effort in reading and understanding both the PC Staff report for November 1st and the Hunter project EIR. The City sent these documents out on Tuesday October 25th. That allows people barely 7 days to read and critique these voluminous documents. That is just simply not fair. I am asking for an extension of at least three weeks to allow people to read and intelligently comment on the EIR as well as read and understand the Staff report. Sincerely, Pat Dell.

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 9:08 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter street

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Calie Candia <caliesworld@aol.com>
Sent: Thursday, October 27, 2022 12:27 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter street

Please allow for more time to read the EIR on the Hunter St project, as building in a flood plain could seriously impact my home.

Thank you.
Calie Candia
Vineyard Valley a resident.

Sent from my iPad

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 10:53 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Subdivision Tentative Map application and Final EIR will be considered by the Planning Commission at a public hearing on November 1, 2022 at 6 pm.

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Wendy Strachan <wendymarystrachan@gmail.com>
Sent: Thursday, October 27, 2022 12:13 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Subdivision Tentative Map application and Final EIR will be considered by the Planning Commission at a public hearing on November 1, 2022 at 6 pm.

Att: Maya DeRosa, Community Development Director and Cindy Tzafopoulos, City Clerk

Dear Maya and Cindy.

I refer to the information submitted by the city a few days ago with regard to the above project.

The document is very long, with material repeated in some areas and is difficult to read in other areas.

I respectfully request that due to the significance of this project, the city grants an extension of time to allow everybody a reasonable amount of time to review the Final EIR (FEIR)

Thank you for your assistance.

Best regards.

Wendy

Wendy Strachan
53 Laguna Seca Ct.
St Helena
CA 94574
Tel: 707 968-5140
Cell: 707 256-9854

wendymarystrachan@gmail.com

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 10:54 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Subdivision Urgent Request

Please see comment below for the 11/1 agenda item.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Mary <artsy101@comcast.net>
Sent: Thursday, October 27, 2022 12:13 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Subdivision Urgent Request

Dear Maya and Cindy,

We are formally requesting an time extension in order to review the the final **Hunter Subdivision EIR 2800 page report** before the Nov. 1st deadline to comment on the Hunter Subdivision.

My husband and I live in Vineyard Valley Senior mobile home park and are directly effected by the development.

There is not enough time to review the report!

Thank you,

Mary and John West
3 Laguna Seca Court
St Helena, Ca. 94574
(707)227-7127

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 10:57 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] One week is not enough

Please see public comment below for the 11/1 meeting.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

From: Mariam Hansen <wartuhi@comcast.net>
Sent: Thursday, October 27, 2022 12:12 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] One week is not enough

Hello Maya,
Less than one week to review and comment on the Hunter project EIR is not enough!! It is 2500 pages long!!
Please delay the Planning Commission meeting.
Thank you,
Mariam Hansen
5 San Lucas Ct
St. Helena

From: City of St Helena [mailto:sthelena-ca@municodeweb.com]
Sent: Tuesday, October 25, 2022 11:00 AM
To: wartuhi@comcast.net
Subject: [St. Helena News Alerts] PRESS RELEASE | Hunter Subdivision Tentative Map application and Final EIR to be Considered bu Planning Commission November 1st

PRESS RELEASE | Hunter Subdivision Tentative Map application and Final EIR to be Considered bu Planning Commission November 1st

PRESS RELEASE

TODAY'S DATE: October 24, 2022

RELEASE DATE: Immediate

TITLE: Hunter Subdivision Tentative Map application and Final EIR

(Press Release 2022-36)

CONTACT: **Maya DeRosa, Community Development Director**

mderosa@cityofsthelena.org **(707) 967-2783**

ST. HELENA, CA –

The City of St. Helena Community Development Department announces that the Hunter Subdivision Tentative Map application and Final EIR will be considered by the Planning Commission at a public hearing on November 1, 2022 at 6 pm. The public is welcome to attend the meeting at Vintage Hall (465 Main Street) or submit a public comment via email to publiccomment@cityofsthelena.org. To be considered at the Planning Commission meeting, written public comment should be submitted no later than 1 pm on November 1, 2022.

The agenda materials including the staff report and Final EIR may be viewed at the following link:

https://sthelena.civicweb.net/Portal/MeetingInformation.aspx?Org=Cal&Id=1010

A public viewing copy of the Final EIR may be found at City Hall (1572 Railroad Avenue) or the St. Helena Library starting on October 26th.

The original application to subdivide the 16.9 acre property located at the eastern terminus of Adams Avenue was filed in 2010 and over the years there has been public meetings to consider the residential subdivision project and Environmental Impact Report. Most recently, the updated Draft EIR that studied the impact of the 87 unit development at the minimum density of 5.1 dwelling units per acre was released for public review between September 23, 2021 and November 30, 2021 and the City conducted two public meetings to receive comments on the Draft EIR during that period. Responses have been prepared to all comment letters in the Final EIR.

The Planning Commission may only make a recommendation on the Tentative Map and Final EIR to the City Council. The City Council is the final decision-making body on the Tentative Map and Final EIR. At this point, a City Council date for action on this application has not been identified.

###

Please do not reply to this message. The email cannot accept inquires.

For more information about contacting the City of St. Helena, please visit our Contact Page: https://www.cityofsthelena.org/contact

Unsubscribe

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 10:58 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Requesting more time!

Please see public comment below for the 11/1 meeting.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Kenneth Bergeron <kenbergeron1969@gmail.com>
Sent: Thursday, October 27, 2022 12:02 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Requesting more time!

I'm requesting more time to read and understand the Hunter Subdivision information. This much information can't be digested prior to the approval meeting on November 1, 2022.

Life safety is my greatest concern. Where will the water that would fill the retention pond go once it is filled with houses?

Please consider giving use more time,
Thank you,
Kenneth A. Bergeron
19 San Lucas Ct
Sent from my iPhone.

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 10:59 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Project EIR Report

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Denise Lloreda <dlloreda1@yahoo.com>
Sent: Thursday, October 27, 2022 12:01 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project EIR Report

Dear Director DeRosa and Clerk Tzafopoulos,

My name is Denise Lloreda. I live at 14 San Lucas Court in Vineyard Valley Mobile Home Park.

While not diametrically opposed to the Hunter Project, I have some concerns. As such, I am writing to request an extension of time to review the recently released Final EIR (FEIR) currently on the City website. This document which is over 2800 pages long, will require additional time for the Vineyard Valley leadership, and others, to explore.

I understand the Tentative Map application and Final EIR will be considered by the Planning Commission at a public hearing on November 1, 2022 at 6 pm. And that public comment is welcome at that time. In order to provide relevant and pertinent questions a thorough review must first be performed.

Your consideration is appreciated.

Thank you,
Denise Lloreda

Denise Lloreda
626-215-7466

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 10:59 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] EIR for Hunter Project

Please see public comment below on the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Rhondda Grimm <rreeddesign@mac.com>
Sent: Thursday, October 27, 2022 11:57 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Tom Grimm <tom@the-grimms.net>
Subject: [External] EIR for Hunter Project

Dear Ms. DeRosa,

My husband and I are requesting an extension of time in order to thoroughly review the 2800 page Final EIR document for the Hunter project. The project will have a huge impact on surrounding communities and St. Helena resources, so it needs more time than was given to us citizens to carefully assess the content.

Sincerely,

Tom and Rhondda Grimm
St. Helena

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 11:07 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter project

Please see public comment below for 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: gdkistner@comcast.net <gdkistner@comcast.net>
Sent: Thursday, October 27, 2022 11:56 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Cc: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter project

Hi Maya,

I would like to ask you to consider a continuance of the proposed Hunter project that is scheduled for review by the Planning Commission on November 1st. The public needs time to review the EIR and other documents including the 1993 and current General Plans. In view of the time required to review these documents I believe a continuance is definitely necessary.

Thank,
Grace D Kistne25
San Juan Court
St. Helena

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 11:09 AM
To: Xinia Gamero
Cc: Joseph Leach; Eric Norris
Subject: FW: [External] Hunter Subdivision Tentative Map application and Final EIR

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Jack Glasso <napajackg@gmail.com>
Sent: Friday, October 28, 2022 10:55 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision Tentative Map application and Final EIR

Where is the additional water for all these houses coming from? I'm already on water restriction and cannot accept any more reductions.
Resident of St Helena
John Galasso
Grove Ct

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 2:53 PM
To: Xinia Gamero
Subject: FW: [External] The citizens of St Helena request and deserve an extension for the Hunter EIR

Public comment.

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
www.cityofsthelena.org

*Please note that City Hall is closed to the public and will not answer calls from 12:00 to 1:00 pm for lunch. Please phone individual departments to make an appointment for service.

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From: ann@nieman.org <ann@nieman.org>
Sent: Wednesday, October 26, 2022 1:32 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] The citizens of St Helena request and deserve an extension for the Hunter EIR

Hi Cindy,

Please forward my email to the Planning Director, City Manager, PC and CC. Thank you for your assistance as always.

As a citizen of St Helena, I am requesting that an extension to review the extensive 2,000+ page FEIR report and Response to Comments (by St Helenans to the DRAFT EIR) be provided – a few reasons for this very fair and basic request are as follows:

1) The Hunter FEIR document is over 2,000 pages in length. St Helenans are residents that work, have families and need more than a few days to review such a lengthy document. The EIR authors had months and months to review our comments – are we not allowed to have the courtesy of more than a few days to review this extremely important document that will add 10% to our population and add significant risk behind our taxpayer-owned levee?

2) The City's email of the PC Agenda had a broken link to the FEIR, and citizens were unable to access the FEIR. The Planning Director fixed the link this weekend after being notified by a citizen who was able to get through, but time to read the document was lost.

3) The document is now on the website, but it is Tuesday, which has again limited the time to review this document

4) There is no time to request public information that the FEIR refers to – for example, the EIR states that "the City has maintained the levee since the beginning", but we know that is not true, because from a previous public records request, the City showed that they had indeed not maintained the levee, and still there are no records showing that on the website – please check for yourselves. We have requested access to the levee maintenance records since 2011 from the City Clerk but the link she provided has NO RECORDS ON THE PUBLIC WEBSITE SHOWING MAINTENANCE SINCE 2011 DESPITE THE CLAIM BY THE FEIR THAT RECORDS EXIST. How are citizens to verify this FEIR claim is true if we cannot access public information?

5) A general issue is in this request for this needed additional time is that Citizens have to be able to request proof of the FEIR claims when none has been provided, and cannot do that in a few days time, because the city cannot provide them. Citizens had no idea that the EIR would make claims this without demonstrating the validity, so the public has the right to request the documentation to support these unsupported claims.

Thank you for your attention to this matter and we hope the city of St Helena will ensure that citizens have sufficient time to review this document and time to get responses for records to verify FEIR claims, especially since St Helena city officials continue to stand on the principle of transparency in government. Many of us are also questioning why the name of the project that has been in place for over a decade "The Hunter Project" was not referenced in the city's PC Agenda notice – people did not know it was this project, which as you know has been of great concern to many people. We certainly hope the Applicant did not request that it not be listed as such in an effort to make it unclear to the public, because it certainly did make it unclear to many. We appreciate your ongoing efforts to ensure transparency.

Thank you City Council, Planning Commission and City Staff for your service to St Helena,
Ann Nevero

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:00 PM
To: Xinia Gamero
Subject: FW: [External] More Time to Review

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
www.cityofsthelena.org

*Please note that City Hall is closed to the public and will not answer calls from 12:00 to 1:00 pm for lunch. Please phone individual departments to make an appointment for service.

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From: Gigi Batchelor <gg.batchelor@yahoo.com>
Sent: Wednesday, October 26, 2022 4:11 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] More Time to Review

Good afternoon Cindy!

As I resident of Vineyard Valley, I respectfully request more time to review the documents for the Hunter Project.

Thank you.

Gerilee (Gigi) Batchelor
11 Redondo Court
Saint Helena, Ca 94574
707/363-6343

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:13 PM
To: Xinia Gamero
Subject: FW: Hunter Project EIR Review

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
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-----Original Message-----
From: David Armington <david.armington@hotmail.com>
Sent: Wednesday, October 26, 2022 4:46 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project EIR Review

I am a resident of Vineyard Valley and I will be directly affected by the proposed development. Please allow additional time for me to study the documents before the hearings.

Respectfully,

Dave Armington
6 Del Monte Ct
St Helena

Sent from my iPad

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:27 PM
To: Xinia Gamero
Subject: FW: [External] Request for continuance of Hunter Project - 11/1 Planning Comission

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
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From: Megan Long <megan.long@gmail.com>
Sent: Wednesday, October 26, 2022 6:22 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Request for continuance of Hunter Project - 11/1 Planning Comission

Hi, I'm joining fellow residents to request a continuance of item 5.1 (Hunter Project) at the 11/1 Planning Commission in order to give citizens more time to review the complete 3,000-page EIR that was made publicly accessible over the past weekend. Thank you.

Best,

Megan Long
1337 Pine St
megan.long@gmail.com

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:31 PM
To: Xinia Gamero
Subject: FW: [External] Please extend our review time for the Hunter EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
www.cityofsthelena.org

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E-mail correspondence with the City of St. Helena (and attachments, if any) may be subject to the California Public Records Act, and as such may therefore be subject to public disclosure unless otherwise exempt under the Act.

-----Original Message-----
From: D and S Gmail <dgsandscs@gmail.com>
Sent: Wednesday, October 26, 2022 7:02 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Cc: Dave and Susanne Scott Gmail <DGSandSCS@gmail.com>
Subject: [External] Please extend our review time for the Hunter EIR

It’s only fair and reasonable to enable those of us who bear financial responsibility for the safety of this proposed development to read, understand, and comment on its content.
Thank you for your consideration.
Sincerely,
Dave & Susanne Scott
Homeowners
843 Signorelli Circle
St Helena, CA

Sent from my iPhone

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:32 PM
To: Xinia Gamero
Subject: FW: [External] Please delay Hunter hearing

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
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-----Original Message-----
From: Susan McWilliams <susanmcwilliams@comcast.net>
Sent: Wednesday, October 26, 2022 7:07 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Please delay Hunter hearing

This is an enormous project that demands input from all concerned citizens; access to the 3,000-page report and lots of time to read it. We have not been given nearly enough time.
Thank you.
Susan McWilliams

Sent from my iPhone

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:34 PM
To: Xinia Gamero
Subject: FW: [External] Extension

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
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-----Original Message-----
From: sandra.archibald@gmail.com <sandra.archibald@gmail.com>
Sent: Wednesday, October 26, 2022 7:08 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Extension

Dear Cindy
It would be helpful i we could get an extension. I know the PC is anxious to bring this to closure yet the time to review the total document is quite limited.

Thank you for your consideration if this request.

Sandra 0. Archibald
Dean and Professor Emerita
Evans School of Public Policy & Governance University of Washington Box 353055 Seattle, WA 98195

Home address
Sandra Archibald McCorkle
1178 Meadowcreek Circle
St . Helena, CA 94574

707.804.8263

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:34 PM
To: Xinia Gamero
Subject: FW: [External] Hunter EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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From: Elaine de Man <elainede@sbcglobal.net>
Sent: Wednesday, October 26, 2022 7:13 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter EIR

Hi Cindy,

Please request that the Planning Commission postpone the review of the Hunter EIR for *at least* a month so that the community has an opportunity to review it.

Thank you,

Elaine de Man

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:34 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Project

Public comment.

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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From: Ester Akersloot <heliosascarta@gmail.com>
Sent: Wednesday, October 26, 2022 7:41 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project

Dear Cindy,

Please extend the Hunter EIR so citizens have a reasonable time to review this nearly 3,000 page document . Thank you.

Sincerely,
Ester Akersloot
St. Helena

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:35 PM
To: Xinia Gamero
Subject: FW: [External] Hunter

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
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-----Original Message-----
From: Bernerd Buckley <bernerdbuckley@gmail.com>
Sent: Wednesday, October 26, 2022 8:23 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter

I would like more time to review the documents on the Hunter project

Sent from my iPhone

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:36 PM
To: Xinia Gamero
Subject: FW: [External] Hunter EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
www.cityofsthelena.org

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-----Original Message-----
From: Henry Gundling <henry.gundling@gmail.com>
Sent: Wednesday, October 26, 2022 9:09 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter EIR

Please extend the review period for the Hunter EIR. Ten days for review of a roughly 3,000 page document is grossly inadequate.

Thank you,

Henry Gundling

Sent from my iPhone

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:37 PM
To: Xinia Gamero
Subject: FW: [External] Hunter project review

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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-----Original Message-----
From: Larry Vermeulen <vermeulenlw@gmail.com>
Sent: Wednesday, October 26, 2022 9:57 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter project review

Cindy,
The public review period for the Hunter project is entirely too short for a project of this magnitude. Please extend the review period for 30 days to allow for proper public review.
Thank you,
Larry Vermeulen

Sent from my iPhone

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:37 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
www.cityofsthelena.org

*Please note that City Hall is closed to the public and will not answer calls from 12:00 to 1:00 pm for lunch. Please phone individual departments to make an appointment for service.

E-mail correspondence with the City of St. Helena (and attachments, if any) may be subject to the California Public Records Act, and as such may therefore be subject to public disclosure unless otherwise exempt under the Act.

From: Gayle Davies <gayleddavies@gmail.com>
Sent: Wednesday, October 26, 2022 11:14 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project

Due to the length of the EIR as well as the difficulty in reading the comments, I ask that we be granted an extension of time for proper review.

Thank you,
Gayle Davies
St Helena resident

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:38 PM
To: Xinia Gamero
Subject: FW: [External] Hunter project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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From: Holly <holihshorizons@aol.com>
Sent: Wednesday, October 26, 2022 11:50 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter project

I request an extension to the Hunter EIR so citizens have a reasonable time to review this nearly 3,000 page document.

Thank you,

Holly Rogers

Sent from the all new AOL app for Android

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:39 PM
To: Xinia Gamero
Subject: FW: [External] Hunter EPA

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
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From: Peter McClory <petermcclory@ymail.com>
Sent: Thursday, October 27, 2022 6:55 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Cc: Ann Nevero <ann@nieman.org>; Holly Mason <hollymason1979@gmail.com>
Subject: [External] Hunter EPA

Please extend the time allotted for review of the Hunter EPA report. It is complicated and reviews multiple aspects of St Helena that could be adversely effected by the project.

Thank you,

Pete McClory
813 Signorelli Circle
SH 94574

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:40 PM
To: Xinia Gamero
Subject: FW: [External] Extension request

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
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From: Lisa Pelosi <lisahdew@gmail.com>
Sent: Thursday, October 27, 2022 7:11 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Extension request

Hello,
Please, please please …I respectfully request an extension to the Hunter EIR so that citizens have reasonable time to review a 3000 PAGE document.

More time is necessary for full transparency of the issue before the community potentially is effected by this project.

Thank you.

Sincerely,
Lisa Pelosi
Honeydew Estate Mgmt
415-602-9176
Sent from my iPhone, pardon the typos

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:40 PM
To: Xinia Gamero
Subject: FW: [External] Request of time extension for Hunter Project Document Review

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
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From: Christopher Smith <christopher.smith777@gmail.com>
Sent: Thursday, October 27, 2022 7:30 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Request of time extension for Hunter Project Document Review

Greetings:
May you kindly extend the time frame for citizens of Saint Helena to read the related documents of the Hunters Project prior to meeting.
Thanks for your consideration.
Chris Smith

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:40 PM
To: Xinia Gamero
Subject: FW: [External] Hunter EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

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Fax 707-963-7748
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-----Original Message-----
From: Russell Gold <russell.gold@thulile.com>
Sent: Thursday, October 27, 2022 7:39 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter EIR

Good Morning,

This is a request for an extension to the Hunter EIR. As you are well aware there have been numerous issues with access and readability of the document.

Thank you
Russell Gold
1192 Meadowcreek

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:41 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – NEW ADDRESS!
St. Helena, CA 94574

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-----Original Message-----
From: Sandra Lowry <sandralowry@comcast.net>
Sent: Thursday, October 27, 2022 8:42 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project

Dear Cindy,
The Hunter project document is nearly 3,000 pages. Nov. 1st will not give the public enough time to read the document. I respectfully request an extension of time. Thank you. Sandra Lowry, 1175 Starr Avenue.

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:42 PM
To: Xinia Gamero
Subject: FW: [External] please extend time to review St Helena housing project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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ctzafopoulos@cityofsthelena.org
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From: Lisa Goldfarb <foolsgoldfarb@gmail.com>
Sent: Thursday, October 27, 2022 9:09 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] please extend time to review St Helena housing project

Hi there,
I don't know how quickly you ready, or if you have other obligations in your day to day life, but, for the majority of people, understanding dense text slows reading speed down to around 20 pages an hour.
Given this is a 3000 page document, and it needs careful attention to what is being proposed, an adequate amount of time to review it would be approximately 150 hours.

Seeing as people sleep, eat, and have other jobs or obligations throughout their day, asking someone to spend 4-5 solid hours/day reading this text seems doable. this would break down to around 33 days to just get through the text.

I would ask that we are given at least that much time to review this document.

thank you,
Lisa Goldfarb

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:42 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

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From: Dyan Beito <dbeito@gmail.com>
Sent: Thursday, October 27, 2022 9:19 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project

Dear City Clerk,

I'm a 20+ year resident of St Helena so I've follow this project form the beginning. With that in mine I would like the time to review the 3000 page document posted to the website. However one I wasn't able to get it downloaded and two you have not given enough time with the Nov 1 meeting, for a complete review.

Therefore I firmly believe an extension should be given to give all residents a chance to review this important document.

Respectfully,

Dyan Beito
707 Hunt Ave, St Helena, CA 94574

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:42 PM
To: Xinia Gamero
Subject: FW: [External] Hunter project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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From: Paula Goyins <pjgoyins@yahoo.com>
Sent: Thursday, October 27, 2022 9:53 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter project

We need more time to read and understand the magnitude of this undertaking! Roger and Paula Goyins

Sent from Yahoo Mail for iPad

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 3:43 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
*1572 Railroad Avenue – ***NEW ADDRESS!***
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From: Elizabeth Green <green05@sbcglobal.net>
Sent: Thursday, October 27, 2022 9:56 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project

My husband and I live in Vineyard Valley. The ramifications of the Hunter Project are extremely concerning and even more concerning is the difficulty to access the final EIR which is over 2000 pages. We are asking for an extension in order to review this document.

Thank you.

Rodney & Elizabeth Green

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 4:52 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Project/EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
www.cityofsthelena.org

Office Hours:
Monday – Friday
9:00 a.m. – 4:00 p.m.
Closed for Lunch between 12:00 – 1:00 p.m.

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-----Original Message-----
From: Diana L <dmlavagnino@gmail.com>
Sent: Thursday, October 27, 2022 10:19 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project/EIR

Please give the community more time to study this report before pushing through approval - Thank you, Diana Lavagnino

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 4:53 PM
To: Xinia Gamero
Subject: FW: [External] Extension

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
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From: Mary Gundling <marycgundling@gmail.com>
Sent: Thursday, October 27, 2022 10:27 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Extension

Please grant an extension, so we have time to read the complete EIR.

Thank you.

Mary and Henry Gundling
1185 Meadowcreek Circle
St. Helena

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 4:53 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Subdivision - Urgent Request

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
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From: K'lyn Matthews <mayakmah.klm@gmail.com>
Sent: Thursday, October 27, 2022 10:50 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Subdivision - Urgent Request

I would like to request an extension of time to review the Final EIR (FEIR) currently on the City website.At over 2800 pages long, I require additional time to explore this important document.

Please provide a reasonable window for review of the Tentative Map application and Final EIR to be considered by the Planning Commission at a public hearing.

Thank you,

Kristi Lyn Matthews
14 Redondo Ct, St Helena, CA 94574

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 4:53 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
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From: Bette Antor <bantor8@gmail.com>
Sent: Thursday, October 27, 2022 10:53 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project

In light of the Final EIR consisting of 2800 pages, please reschedule the November 1 meeting to a later date to ensure our ability to read the voluminous document.
It's the right thing to do.
Bette Antor

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 4:53 PM
To: Xinia Gamero
Subject: FW: [External] Request for extension of time for review of EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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ctzafopoulos@cityofsthelena.org
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From: ELLEN COTTEN <ellencotten@comcast.net>
Sent: Thursday, October 27, 2022 11:01 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Request for extension of time for review of EIR

Due to the length of the most recent Hunter EIR I am requesting an extension of time to review the document.
Ellen Cotten
1 Del Rio Ct

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 4:55 PM
To: Xinia Gamero
Subject: FW: [External] FEIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
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-----Original Message-----
From: Dottie Gingerelli <dgingerelli@comcast.net>
Sent: Thursday, October 27, 2022 11:33 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] FEIR

Ms. Tzafopoulos,

I'm contacting you to request an extension of time to review the Final EIR (FEIR) currently on the City website. Recently released, this document which is over 2800 pages long, will require additional time to explore.

Thank You,
Dottie Gingerelli
50 Laguna Seca Ct
St Helena, CA 94574
dgingerelli@comcast.net

Sent from my iPhone

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 4:56 PM
To: Xinia Gamero
Subject: FW: We need a time extension!!!

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
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From: John West <john.west@apmortgage.com>
Sent: Thursday, October 27, 2022 11:58 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Cc: John West <john.west@apmortgage.com>; Mary Thomas West <artsy101@comcast.net>
Subject: [External] We need a time extension!!!

I am a primary homeowner here in St. Helena. Giving the people of SH just 10 days to review this huge EIR for the Hunter Subdivision is RIDICULOUS. We all need more time. I request that the city grant at least a 60 day extension before the next hearing on this project.

John West | Senior Loan Officer | NMLS# 247892
First Class Lending, a division of
American Pacific Mortgage
MBA, Finance / Honors Graduate, Stanford Graduate School of Credit and Finance
Direct: (949) 500-3424 or **(707) 310-8535** **Email: john.west@apmortgage.com**

Send me a file securely: Click Here

Confidential: This electronic message and all contents contain information from American Pacific Mortgage Corporation which may be privileged or confidential. The information is intended for the individual or entity named above. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the contents of this information is prohibited. If you have received this electronic message in error, please notify the sender by reply e-mail and destroy the original message and all copies.

Alert: For your protection and our customer's data security, we remind you that this is an unsecured email service that is not intended for sending confidential or sensitive information. Please do not include social security numbers, account numbers, or any other personal or financial information in the content of the email when you respond.

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 4:58 PM
To: Xinia Gamero
Subject: FW: [External] Hunter st.

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

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-----Original Message-----
From: Calie Candia <caliesworld@aol.com>
Sent: Thursday, October 27, 2022 12:29 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter st.

Please allow more time to review the EIR report on the hunter st. Project, as the impact of building on a flood plain may have serious impact on where I'm living. Thank you Calie Candia Vineyard Valley resident.

Sent from my iPad

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 5:00 PM
To: Xinia Gamero
Subject: FW: [External] Extension To the Hunter EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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From: Andi Brown <adidionbrown@gmail.com>
Sent: Thursday, October 27, 2022 1:48 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Extension To the Hunter EIR

I am writing as a concerned citizen of St. Helena to ask for an extension for the EIR document.

Sincerely,
Adrianna Didion-Brown
1174 Meadowcreek Circle
St. Helena, Ca 94574

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 5:06 PM
To: Xinia Gamero
Subject: FW: Extension

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
www.cityofsthelena.org

Office Hours:
Monday – Friday
9:00 a.m. – 4:00 p.m.
Closed for Lunch between 12:00 – 1:00 p.m.

E-mail correspondence with the City of St. Helena (and attachments, if any) may be subject to the California Public Records Act, and as such may therefore be subject to public disclosure unless otherwise exempt under the Act.

-----Original Message-----
From: Joel Toller <joel@thejoeltollerteam.com>
Sent: Thursday, October 27, 2022 2:37 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Extension

To whom in may concern. I would like to request that the city postpone making any decisions on the Hunter property until sufficient time has been provided to review the 3000 page document by the citizens of St Helena.

Thank you, Joel Toller
DRE#01259088
707-738-6860
joel@joeltoller.com

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 5:13 PM
To: Xinia Gamero
Subject: FW: [External] Hunter Project Comment and Request for delay

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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From: Kelly Wheaton <a4est42@gmail.com>
Sent: Thursday, October 27, 2022 3:37 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>; Geoff Ellsworth <GEllsworth@cityofsthelena.org>; Paul Dohring <PDohring@cityofsthelena.org>; Autumn Anderson <AAnderson@cityofsthelena.org>; Daniel Hale <DHale@cityofsthelena.org>; Aaron Hecock <ahecock@cityofsthelena.org>; Rosaura Segura <rsegura@cityofsthelena.org>; John Ponte <JPonte@cityofsthelena.org>; Eric Hall <EHall@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>; Christopher Warner <Christopher.Warner@cityofsthelena.org>; Lester Hardy <LHardy@cityofsthelena.org>; Marika Rothfeld <mrothfeld@cityofsthelena.org>
Subject: [External] Hunter Project Comment and Request for delay

Request for delay so that The EIR can be properly vetted.

Dear Staff, Mayor Ellsworth, Councilmembers, Planning Commissioners and Consultants,

Aside from the fallacious water offsets to achieve miraculous water neutrality, it is obvious that no one has calculated the increased liability to the City of St Helena should the levee ever fail.

Please read this study by UC Davis before making any decisions. https://www.ucdavis.edu/news/behind-levee "People living behind levees on floodplains may not be as immune to flood damage as they think, according to results

of a study led by the University of California, Davis. Levees often prevent costly flood damages and even loss of life. However, when those levees overtop or fail, and water spills onto the floodplain, the long-term damage can be far worse than if those levees were not there, the study found."

Having a levee does not miraculously turn a floodplain into a safe building site. I am happy for Vineyard Valley residents that the levee has made them safer in the short term. However, putting more residences behind a levee increases St Helena's risk should there be a catastrophic failure. From what I have been able to read the EIR does not adequately address this from the standpoint of the City's risk.

Sincerely,
Kelly Wheaton
Inglewood
707-963-9609

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 5:14 PM
To: Xinia Gamero
Subject: FW: Hunter Project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
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From: Schlatter, Laurence <lschlatter@merryvale.com>
Sent: Thursday, October 27, 2022 3:47 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter Project

Hello!

With this email, we would like to request an **extension** to the Hunter Project EIR in order to have a reasonable amount of time to review the nearly 3,000 page document.

As a resident of Starr Avenue, we are deeply concerned with the negative impact of such a massive development on a flood plain right next to our neighborhood.

Sincerely,

Laurence and Rene Schlatter
1183 Starr Avenue

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 5:18 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Subdivision

Please see comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

From: Greg Nelson <voltman1@comcast.net>
Sent: Friday, October 28, 2022 11:48 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Subdivision

Please consider extending the review time for this 2800 page document so residents that this project will have a direct impact on, like myself, have time to fully read.

Thank You
Greg Nelson

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 5:27 PM
To: Xinia Gamero
Subject: FW: [External] request extension to the Hunter EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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Closed for Lunch between 12:00 – 1:00 p.m.

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From: v.ferrell@comcast.net <v.ferrell@comcast.net>
Sent: Thursday, October 27, 2022 7:00 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] request extension to the Hunter EIR

Hello Cindy,

I'd like to Request an extension to the Hunter EIR.
This is a huge document and needs time to be digested by the community.

Thank you,

Valli Ferrell
780 Chiles Ave.
SH, CA

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 5:28 PM
To: Xinia Gamero
Subject: FW: [External] Final EIR

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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-----Original Message-----
From: pinutbutter2@gmail.com <pinutbutter2@gmail.com>
Sent: Thursday, October 27, 2022 9:01 PM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Final EIR

Hello there,

I would like to request more time to review the Hunter Final EIR since it is around 3000 pages. I need time to read it on line which will take me longer than a week. I would appreciate a lot of extra time. It is a lot of papers to go through. Thank you.

Sincerely,
Cathy Small
9 Del Monte
St Helena

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 5:28 PM
To: Xinia Gamero
Subject: FW: [External] Hunter project

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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E-mail correspondence with the City of St. Helena (and attachments, if any) may be subject to the California Public Records Act, and as such may therefore be subject to public disclosure unless otherwise exempt under the Act.

-----Original Message-----
From: Mehdi Eftekari <mehdieftekari@gmail.com>
Sent: Friday, October 28, 2022 6:45 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Hunter project

I'm writing to request for an extension to Hunter EIR, so we as citizens of city of St. Helena have reasonable chance to read and better understand the nearly 3000 page document regarding the Hunter project.

I feel that it is a risky project for the city to take, specially when the city and the taxpayers are fully liable for the levee and any damages to the homes proposed to be build behind it caused by levee failure.

I don't believe giving 10 days window to read all nearly 3000 pages of documents with problems that encountered with the online tech issues is enough time to consider the liability for this very risky project.

Thank you for your attention to my request.

Mehdi Eftekari
1176 Starr Ave.

St Helena

Sent from my iPhone

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Friday, October 28, 2022 5:28 PM
To: Xinia Gamero
Subject: FW: [External] Planning Department Nov. 1 meeting

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
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-----Original Message-----
From: Connie Wilson <clw1956@comcast.net>
Sent: Friday, October 28, 2022 7:22 AM
To: Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Planning Department Nov. 1 meeting

Hello Cindy,

This letter is to request an extension for proper review of the 3000 page document of the “Hunter Project” on the November 1st Planning Commission agenda.

Thank you.

Connie Wilson
St. Helena

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 5:45 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Project

Please see comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

From: Jean Martin <jean4391@att.net>
Sent: Thursday, October 27, 2022 11:40 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Dear Ms. De Rosa,

I am a resident of Vineyard Valley and am concerned with the possible development of the Hunter Property which could have a serious impact on Vineyard Valley in the event of a disaster requiring us to evcuate. There is only ONE, count them, ONE exit from Vineyard Valley for over 200 people and that is through the front, exiting onto Pope.

Meanwhile, we could, God forbid if we had to, evacuate not only through the Pope Street exit, but also through the back of the Park at the Hunter Property.

Therefore, I would ask that you would delay the coming meetings to allow all involved to go over the hundreds of pages in the proposals in order to come up with a solution which would work for all parties concerned, thank you.

Sincerely,

Jean Martin
jean4391@att.net

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 5:46 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter subdivision

Please see comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: steve mcnabb <stevemcnabb@icloud.com>
Sent: Thursday, October 27, 2022 11:38 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter subdivision

Please continue this hearing to allow more time to review.
Sent from my iPad

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 5:47 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter Project

Please see public comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Bob Childs <bobchilds@aol.com>
Sent: Thursday, October 27, 2022 11:14 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter Project

Good day.

I respectfully ask for an extension of the FEIR of this project to give sufficient time to review.

Thank you in advance.

Robert Childs
2 La Canada Ct
SH

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 6:00 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Request for time

Please see comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: Jurg Oggenfuss, CSW, WSET cert. <j.oggenfuss@gmail.com>
Sent: Thursday, October 27, 2022 11:03 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Request for time

We need additional time to study the FEIR for the Hunter subdivision.

Suzanne & Jurg Oggenfuss

FROM RECENT HEADLINES

Drought Watch

St. Helena Star October 27, 2022

Bell Canyon Reservoir at 64.1%

Urgent need to save water-Pump failure reduces water supply

St. Helena Star October 27, 2022

St. Helenans were notified Thursday of an urgent need to curtail water use after the failure of one of the City's two groundwater wells.

Our water system continues to pose challenges," Public Works Director Joe Leach said. "**With significant deferred maintenance (emphasis added),** we experienced a pump failure at one of our two wells and are currently operating at significantly reduced capacity……The pump failure is the latest in a string of mishaps that have highlighted the **vulnerability of St Helena's aging water system (emphasis added)**…….. St Helena's long neglected infrastructure-including **water, sewer and storm drains (emphasis added)** has dominated the current city council campaign.

AND THIS HAS BEEN THE CASE FOR YEARS

St. Helena tallies $58 million in infrastructure projects

St. Helena Star Jun 7. 2021, updated July 19, 2021

"It's a familiar story in St. Helena: Too many infrastructure projects, not enough money."

City of St. Helena addresses complaints about water quality

St. Helena Star Mar 2, 2021, updated April 28. 2021

"St. Helena's water system is drawing more water from the City of Napa...to conserve water in St. Helena's Ball Canyon Reservoir, which is down to 40% capacity."

City of St. Helena Fails Drinking Water Standard

Patch.com April 8, 2021

"The city did not meet treatment requirements while working to disinfect the Louis Water Treatment Plant after the Glass Fire."

St. Helena approves plans for $16.2 million sewer plant upgrade

St. Helena Star Feb 23. 2021, updated Jun 9, 2021

"It's a necessary move for the city....the plant isn't capable of complying..."

These headlines tell a story about the current state of critical infrastructure in the City of St. Helena. The consistent theme is that substantial investment in St. Helena's critical infrastructure is needed for the **current** residential footprint and the City doesn't have enough money!

The City is currently lacking adequate critical infrastructure including in particular the following:

- Water
- Sewer/Wastewater
- Storm drainage and flooding
- Roads
- Sidewalks
- Utilities
- Police
- Fire, and
- Schools

We believe approval of the proposed project which adds 51 single family homes, 25 multifamily units, and the corresponding increase in population would constitute gross negligence in that it would further strain and likely break our infrastructure.

Water Supply and Sewer/Wastewater. How could any proposal of this size not cause serious water and wastewater issues for the City? How could this project be water neutral? This project will literally require millions of gallons of water annually. Where is this water going to come from? Commissioners were recently quite skeptical (appropriately) of a report that a single-family home would be water neutral. One commissioner said it didn't stand the commonsense test. It didn't. So how can this project with 75 times the water requirements be water neutral. The project also proposes to activate abandoned wells for landscaping. How do we know that is going to work? And, if it does, is it done at the expense of well usage by current residents? Then there is the other side of water usage-wastewater. Millions more gallons of wastewater per year to a sewer system that can't handle today's current needs.

Storm drainage and Flooding. The City's current drainage system is inadequate. It is difficult to believe that building inside the levee on the floor of the basin is not going to add to these problems. We are also concerned that if the levee is compromised the drainage ditches that flow from Fulton Lane through our property will be overwhelmed and back up on our property and onto Fulton Lane. This already occurs with heavy rains. The ditches that handle this drainage are on our property and while apparently it is the City's responsibility to maintain the ditches in the 6+ years we have owned our property the City has not once maintained the ditches. We were told that this was due to the lack of budget at the City. Again, how is it possible that this project doesn't exacerbate the already existing problem.

Roads, sidewalks, traffic, parking. We believe the proposed project will cause the existing and already problematic traffic, congestion, and parking situation in St. Helena to become much worse. The roads (and sidewalks) in St. Helena are awful. Drive on Railroad from Fulton to Hunt. You think you are in a third world country. More traffic means more road repairs and apparently the City doesn't have the money to repair the roads today. The congestion entering and exiting St. Helena via Highway 29 is brutal. People familiar with the area (or using apps such as Waze) find ways around this downtown traffic and congestion. The most common "detour" is using Silverado Trail and turning on Pope Street.

Given the configuration of the Pope Street bridge and the location of the Pope Street and Silverado Trail intersection near the proposed project, traffic will most certainly back up on Pope Street and on Silverado Trail, which creates not just congestion but real risk of accidents. In addition to increased traffic the lack of adequate parking will cause further congestion.

Police, Fire, Schools, etc. The many other essential services that the City provides to its current residents will also be further strained as a result of the proposed project.

Quality of life for current residents. All of the above detracts from the quality of life of current St. Helena residents. Open spaces and access to pedestrian walking paths enrich and enhance the lives of all current residents and particularly those most closely located near the proposed project. Taking land that is agricultural and has a rural feel and building more dense housing, particularly in this part of the City makes us all lose a part of the reason we want live in St. Helena. We watch all kinds of people (families, adults, children, and dogwalkers) enjoying the open space and vineyards on the walking path from town to the river. Often adults and children bike along the path. Families stop and picnics near the path. People walk their dogs enjoying the beautiful open space. Undeniably, the loss of open space and vineyards and safe access to the walking paths will negatively impact residents.

Construction. By the way has anyone looked at the disruption and impacts of construction on the City and its residents?

We are not anti-growth. In fact, we favor thoughtful growth in the City of St. Helena. For example, we believe the City needs to consider development such as hotels which could provide revenue to make improvements in our current flawed infrastructure. However, the above headlines strongly suggest that City doesn't' have sufficient infrastructure for its current footprint let alone a project of the scope proposed. We believe that growth needs to be thoughtful and provide a means to improve (not cause further deterioration) of the City's financial condition and infrastructure.

We believe most St. Helena residents and nearly all those directly impacted because they live nearby are opposed to the proposed project. We are also aware of potential litigation. The City doesn’t need to spend money on lawyers when that money could go to improving critical infrastructure and the quality of life of its current residents.

We respectfully urge the Planning Commission to not proceed with the proposed project.

Patrick and Laura Pohlen

601 Fulton Lane

October 29, 2022

Our Town St. Helena
It all begins at home.

October 30, 2022

TO: City of St Helena Planning Commission

FROM: Our Town St. Helena Board of Directors

SUBJECT: Hunter Project: Proposed Subdivision Tentative Map

Background

Our Town St Helena (OTSH) indicated in previous public testimony concerns related to the proposed Hunter Project. In summary: 1) the single-family lots are sized to support large homes that will likely sell in the $2.0-$3.0 million range in today's market and will not be affordable for our community's working people, young families and seniors; and 2) the parcel designated for "affordable housing" is segregated from the remainder of the homes, and, as such, is in direct conflict with the City's inclusionary housing ordinance that requires integration of the affordable homes and similar bedroom/bathroom counts as the single-family homes. The subdivision as proposed misses the extremely rare opportunity to address St. Helena's acute housing need.

Given the constraints on public comments for environmental impact reports and subdivision maps imposed by governing laws, OTSH will limit this additional testimony to the parameters described in the staff report related to the proposed tentative map, noting that our previous written comments are included with the Final EIR and provide context.

Proposed Tentative Map: Consistency with 1993 General Plan

We thank staff for the evaluation of the proposed tentative map's consistency with the 1993 and 2019 general plans. However, we take exception to the conclusion that the proposed development is consistent with the 1993 General Plan's Guiding Policy 2.6.19 which states:

> "Permit higher density housing in single family neighborhoods as long as the development character of the single family area is maintained (i.e., lot widths, orientation to street, building heights, etc.)."

Objectively, the proposed tentative map is inconsistent with 2.6.19 because the lot where higher-density housing (25 units) would be developed is sized insufficiently to maintain the development character of the single-family homes in the manner the language describes.

Other guiding policies in the 1993 General Plan, while more difficult to evaluate objectively, also suggest the proposed subdivision falls short of fully complying with the General Plan:

P.O. Box 94, St Helena, CA 94574 (707) 302-5111 www.OurTownStHelena.org

2.6.14 Encourage a mix of housing types and price ranges to allow choice for current and future generations of St. Helenans.

2.6.16 Encourage the development of higher density housing in areas near the center of town and close to recreation and services.

The policies are encouraging higher density, urban housing solutions near the city center, so current and future generations can walk or bicycle to town and afford to live close to where they work. The proposed subdivision achieves the lowest density allowed for the single-family lots within the zoning designation.

2019 General Plan Consistency

While the proposed subdivision's consistency with the 2019 General Plan is not as relevant for the decisionmakers to determine whether to approve or deny the proposed tentative map, it is important for leaders and the general public to be cautious about the use of terms like "market rate" and "more affordable".

Staff's analysis concluded the proposed subdivision is consistent with the 2019 General Plan and more specifically policies LU2.1 and ES1.4 (below) because *"The proposed project includes market-rate single family homes and two types of units intended to be more affordable: accessory dwelling units and multi-family units."*

Land Use (LU2.1): Promote a mix of housing types and price ranges that are consistent with the Housing Element RHNA categories of housing affordability.

Economic Sustainability (ES1.4): Encourage the creation of workforce housing to support the local employment base in keeping with small town smart growth.

The use of the term "market rate" to imply the single-family homes will somehow meet RHNA categories should be considered more closely. "Market rate" is simply what the market will support, where RHNA relies on Area Median Income (AMI) to establish categories of affordability for varying income levels and household sizes. Using today's housing market data, the "market rate" for a single-family home with a similar lot size and configuration as what is being proposed is approximately $2 million, while a St. Helena moderate-income household earning $95,000-$143,000 can afford to buy a home in the $285,000-$420,000 range.

To truly encourage housing that would both serve our community and utilize the 'highest and best use of the land, the subdivision should be made up of smaller lots to promote higher density and allow for homes the "missing middle" working professionals and younger families in our area will be able afford.

As has been stated in prior public meetings regarding the Housing Element update and the Hunter Subdivision, counting accessory dwelling units (ADUs) as "more affordable" only works if the ADUs are truly serving as housing at affordable prices. There is no way to guarantee this

unless the City creates a policy / program to incentivize developers to regulate the ADUs. While this is not something that can be considered for the tentative map approval, it should be part of the future affordable housing agreement.

State Housing Law
The staff report cites Government Code Section 65589.5(j)(1) as limiting the City's discretion to deny a proposed housing development, yet the citation is an excerpt of the greater law. The preambles in the code describe California's severe and urgent affordable housing crisis and the intent of the law, which is to limit arbitrary or discretionary review to ensure affordable and higher density projects can get approved and not derailed by bureaucracy and NIMBYism.

Closing
In conclusion, Our Town St Helena submits the proposed tentative map is objectively inconsistent with the 1993 General Plan Guiding Policy 2. 6.19 and should not be recommended for approval by the Planning Commission to the City Council. Further, we encourage the developer and City to work together to create a plan that provides the vital housing our community needs right now and into the future to ensure St Helena is a sustainable, economically thriving city with small-town character.

We understand this project has momentum and the developer has invested a significant amount of time and money into the proposal to date. OTSH would be supportive if the project had smaller lots and more units and would strongly encourage some portion of the units have affordability restrictions (e.g., up to 200% area median income) to ensure they remain affordable to the local workforce and first-time homebuyers. The proposed tentative map is supporting the minimum density allowed. OTSH recommends a supportable density would be around 128 (nowhere near the maximum allowed 270).

OTSH believes it is possible to attain this goal for our community while still giving the developer the support to complete a viable and profitable project. It is imperative that we support housing development that meets the realistic needs of our community. We see this as a positive opportunity for the city and the developer to harmoniously work together to achieve great mutual success. We ask the City to provide the leadership and the developer the cooperation to go beyond just meeting bare minimum code standards so that an innovative, inclusive neighborhood can be created. Our Town St. Helena stands ready to help make this happen in any way we can.

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 5:51 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Extension request Hunter Subdivision

Public comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

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From: kamccreedy@gmail.com <kamccreedy@gmail.com>
Sent: Thursday, October 27, 2022 11:14 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Extension request Hunter Subdivision

Good morning Miss Maya DeRosa,

Might I politely request an extension of time to review the Final EIR (FEIR) currently on the City website regarding the Hunter Subdivision? As this recently released document is over 2800 pages long, it will require additional time to explore. Might you consider providing a reasonable window for review of this important document? It would be greatly appreciated by me as well as others that will be greatly affected by the decisions about the proposed Hunter Subdivision.
Thank you for your consideration.

A concerned citizen of Saint Helena residing in Vibeyard Valley.
Kathleen McCreedy

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 6:01 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Extension

Please see comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

-----Original Message-----
From: Leanne Corkill <leannemobilebiz@gmail.com>
Sent: Thursday, October 27, 2022 11:00 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Extension

I would like to request additional time to review the final EIR of the proposed Hunter project. It is very very long and will require us more time to thoroughly read and review.
Thank you,
Leanne & Thomas Corkill
20 Del Rio
Vineyard Valley Mobile Home Park

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Friday, October 28, 2022 6:02 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter project eir

Please see comment below.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
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-----Original Message-----
From: Denise <denisenelson10@comcast.net>
Sent: Thursday, October 27, 2022 10:54 AM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter project eir

Please consider extending the review time for this 2800 page document so residents that this project will have a direct impact on, like myself, have time to fully read.

Denise Nelson

Xinia Gamero

From: Maya DeRosa
Sent: Monday, October 31, 2022 8:53 AM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Hunter subdivision - hearing date

Please see public comment below for the 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

From: Michael Mills <michael.mills.ca@gmail.com>
Sent: Sunday, October 30, 2022 3:50 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] Hunter subdivision - hearing date

Ms. DeRosa,

Please forward to the Planning Commission this request for a rescheduled hearing date on the Hunter Subdivision.

Thank you,

Michael Mills

———————————

To: City of St. Helena Planning Commission

On Monday October 24 the City announced by press release that the Final EIR and subdivision map are to be

considered by the Commission on Tuesday November 1, just eight days after the announcement. The Staff Report is 2,849 single-spaced pages.

Responsible review of such a document in eight days is obviously impossible. Therefore, on behalf of all residents who may wish to study this project—the largest single development in the City's history, I believe—I ask that you defer the hearing for 90 days. (Less than 90 days will land in the middle of the holiday season.)

The applicant, consultant, and staff have had **one full year**, since the Commission's meeting on November 2, 2021, to consider the comments submitted then and, one assumes, all other relevant issues. At that time, public hearings were scheduled for **Q1 2022**.

Evidently, the applicant, consultant, and staff needed six months more than they had expected to prepare the Final EIR. Suddenly disclosing their work and demanding that the community respond in eight days is, in effect, to deny an opportunity for informed comment.

Thank you,

Michael Mills
1380 Grove Court
917-885-1517

Xinia Gamero

From: Dottie Gingerelli <dgingerelli@icloud.com>
Sent: Monday, October 31, 2022 9:40 AM
To: Public Comment
Subject: [External] Hunter Subdivision

Planning Commission,

I live in Vineyard Valley as do many other seniors. The issues I see against Hunter Subdivision are scarcity of water, necessary emergency exits, and irreparable damage on open land and to downtown businesses already struggling to comeback from fires and COVID.

Living here with the severe climate change increased heat, everyone has received many messages from the City of St. Helena regarding the dire water situation. The city being aware of future warming of the area, and less rainfall expected, puts building a large subdivision in direct conflict with the continuing climate change the area is experiencing.

Vineyard Valley VV has many aged and handicap occupants needing a safe and immediate area for evacuation. There are 2 escape routes for the already existing 200 + homes. Half exit onto Pope and the other half exit onto the area where the subdivision is being proposed. Using the one entrance area to VV for shared exiting is dangerous as Silverado Trail would be unavailable for use. The fire dept. and police hold emergency exit practices using the Adams space aware that evacuation at a single exit would create a backlog putting senior lives in danger.

The environmental impact to subdivide the area would cause irreparable repercussions for the city and for the people who live near it. Property value is high in St.Helena because of the open area and fulfills a smaller town need. Adding a subdivision in this remaining open area, depreciates the homes already here, and brings a city affect minimizing the desires of both citizens and tourists alike who often use it to access downtown shops.

Please contemplate the irreversible negative impact the Hunter Subdivision will create with severe climate change water unavailability, safety issues already in place for hundreds of seniors who have first hand knowledge of the fire danger, and the removal of an environmental area well used by locals and tourists with Adams being a direct path to businesses downtown.

Thank you,
Dottie Gingerelli
50 Laguna Seca Ct.
St. Helena, CA 94575
408-348-8475
dgingerelli@comcast.net

Sent from my iPhone

Xinia Gamero

From: Trudy Bouligny <tbouligny@gmail.com>
Sent: Monday, October 31, 2022 11:01 AM
To: Public Comment
Subject: [External] Hunter Project Hearing November 1 2022

To St Helena Planning Commission Hearing November 1st, 2022

Re Hunter Housing Project near eastern terminus of Adams St. St Helena

Building 87 housing units of various configurations on the property behind the Napa River levee without serious consideration for traffic access does not make sense. Extending the street to Starr Avenue with traffic exiting on to Pope St will create further woes for the Pope St Bridge and turning north and south on Silverado Trail.

Unless serious consideration is give to a new bridge across the Napa River at the end of Adams St. with better visibility for turning on to the Trail, a project of this scale should be rejected.

There are many reasons for denying this planning application - potential flooding issues (Vineyard Valley should never have been built in the flood plain for example), sewer plant upgrades and water shortages, infrastructure problems. We will just start with the traffic issue.

Earl and Trudy Bouligny

Earl and Trudy Bouligny
497 Silverado Trail S
St Helena CA 94574
707-963-0814
707-738-1230 *tbouligny@gmail.com*

Xinia Gamero

From: Jenna Zabin <jennainca2019@gmail.com>
Sent: Monday, October 31, 2022 11:05 AM
To: Public Comment
Subject: [External] Hunter Project concerns

Hello,
My name is Jenna Lavagnino and I live at 15 Del Rio Court in Saint Helena. I utilize and enjoy the levee and all aspects of the open space where the hunter project is proposed. I have so many concerns and have voiced them in prior discussions.
- WATER - we are dangerously low on water now in the town. So much so that all of us at Vineyard Valley or on severe water rationing's. I don't understand how we can be on severe water rationing's yet the city is contemplating the hunter project? I need someone to explain to me where the water will be coming from to house hundreds of more people. What is the plan for the water?
- TRAFFIC - what is the plan for the added traffic congestion? For every house that is built we are looking at at least two cars for every property. Everyone coming and going all day long.
- SEWER SYSTEM- i've been told our infrastructure and sewer system is extremely old and can barely accommodate current levels of usage. How are we going to accommodate 80+ homes?
If the hunter project goes through as planned, I truly believe this will be a travesty and will be devastating!
I could go on and on and on - I will just say please please please reconsider!

Sincerely,
Jenna Lavagnino
510-292-0181

Sent from my iPhone

Xinia Gamero

From: Doris Mosler <dhmosler@gmail.com>
Sent: Monday, October 31, 2022 11:31 AM
To: Public Comment
Subject: [External] Hunter project

As a long time resident of Vineyard valley I'm strongly opposed to this development.
Why:
-water usage
-traffic
-pressure on scant existing resources: police, fire -levee issues: flooding -noisy long term construction -unique quality of town as pleasant serene wine tourist destination would be compromised.

Please stop this project.
Doris Mosler

Sent from my iPhone

Xinia Gamero

From: Maya DeRosa
Sent: Monday, October 31, 2022 2:42 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] Current Hunter Project EIR

Please see public comment for 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

---

From: rick@sthelenahc.org <rick@sthelenahc.org>
Sent: Monday, October 31, 2022 2:31 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; Cindy Tzafopoulos <ctzafopoulos@cityofsthelena.org>
Subject: [External] Current Hunter Project EIR

Ms. DeRosa:

There is not adequate time to review their voluminous responses and therefore request an extension of time prior to any further consideration given to it.

Respectfully submitted:

Rick Crebs
SHHC
707-580-0418

October 31, 2022

City of St. Helena Planning Commission
Re: Hunter Subdivision and Application

Dear Members of the Commission:

We are writing in support of housing at the Hunter property. While there are many challenges in a proposal of this size, we believe it is time for St. Helena to address years of inadequate housing planning and development.

For a little perspective, the first decade we lived here, the plans for Harvest Inn and the Wine Train were under discussion and, of course, contention. As neighbors of one of these projects, we paid attention. Change was hard then, and it still is.

A few years later, one of us joined the first Board of Directors of Stonebridge Apartments and served for 13 years. It's an exemplary property; our children's classmates lived there and it continues to serve the city well over 30 years later.

The Hunter project is needed not only to address our RHNA numbers but, more importantly, to address the urgent need to provide housing for wine industry staff, our city and school district employees, and hospitality and Main Street employees as well.

We would encourage the project to include a broader spectrum of housing types to attract residents from more income levels. In addition to single-family houses and affordable apartments, it's important to include middle-price duplexes and condominiums. Those types of units should replace some planned single-family houses. Since they require less landscaping, water usage would lessen.

Forty-four years ago the Ag Preserve was created to protect agriculture and wildlands in the unincorporated areas, both for Napa's valuable wine industry and its environment. The concept then was that development would occur within the city limits, and it is still. (One of us spent his career in the wine industry and served on the Land Trust of Napa County board of directors, working to protect the countryside.)

We both believe the human, economic and environmental reasons for providing more housing in St. Helena outweigh the desire we all have for nothing to change or for our town to be the way it was at whatever point in time we romanticize.

Thank you for your time and attention.

Loraine and Jack Stuart
St. Helena

DP&F
ATTORNEYS AT LAW

JOSHUA S. DEVORE
jdevore@dpf-law.com

October 31, 2022

Via Email:

Commissioner John Ponte, Chair, jponte@cityofsthelena.org
Commissioner Autumn Anderson, aanderson@cityofsthelena.org
Commissioner Marika Rothfeld, mrothfeld@cityofsthelena.org
Commissioner Rosaura Segura, rsegura@cityofsthelena.org
Commissioner Christopher Warner, cwarner@cityofsthelena.org

City Manager Anil Comelo, acomelo@cityofsthelena.org

Community Development Director Maya DeRosa, mderosa@cityofsthelena.org

RE: Hunter Subdivision Project Environmental Impact Report, File #PL10-040

Dear Chair Ponte, Commissioners, City Manager Comelo, Community Development Director DeRosa:

We represent the Saint Helena Citizens for a Sustainable Future, a diverse group of City residents who are extremely concerned by the City's actions with respect to the referenced project. Numerous members of the Citizens group have individually commented on the project in the past. They write now collectively due to what appears to be an imminent failure of the City to recognize and adhere to recent groundwater requirements.

Before the Planning Commission is a request to certify the Final EIR and approve a Tentative Map for the Hunter Subdivision project. There have been extensive comments on the failures of the EIR to consider basic detrimental aspect of the project. The Final EIR responses have failed to provide a good-faith effort at full disclosure by ignoring, distorting, or giving short-shrift to those comments. As a reminder, this project was tabled nearly a decade ago, in part due to a determined need to improve the Pope Street/Silverado Trail intersection as a result of the project. Obviously, the applicant hopes that has simply been forgotten, or that the City will ignore its level of service (LOS) analysis.

Though VMT analysis is indeed the latest requirement, the project is reviewed under the 1993 General Plan. LOS must be considered per General Plan policies 5.4.1 and 5.4.2. And while there is also an analysis of some portions of the current general plan for comparison, some of the most relevant plan

policies are omitted, such as LU2.6[1] and CR1.4[2] The traffic study acknowledges the significant impact on traffic at Main and Pope Street, but ignores the worsening traffic at Pope/Silverado.[3]

That said, we will not restate all the issues with the EIR here, as they have been raised by more than 100 commenters and are too numerous to list. We do note now however one glaring problem in the proposed findings that requires, at the very least, additional analysis of a significant environmental issue facing all of California, sustainable groundwater management.

The project is for the subdivision of a 16.92 acre property. The EIR analyzed its proposed groundwater use of an on-site well of up to 17.16 acre-feet (AF) per year to provide for all on-site irrigation of public and private landscaping, as well as a small remnant of an existing vineyard. (DEIR 3.9-40.) (The EIR also fancifully suggests that the remainder of the project will be water neutral, despite its demand for nearly 20 AFY beyond that produced by the onsite well. But that fantasy is not even the instant problem.)

The proposed finding regarding the project's consistency with the Napa Valley Subbasin Groundwater Sustainability Plan (GSP) is contrary to the evidence. Proposed Hydrology and Water Quality finding I. 7. states:

> The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The County works with local jurisdictions, including the City, to sustainably manage the Napa Valley Groundwater Subbasin in compliance with SGMA. **In its most recent assessment of conditions, the County, through its technical consultant, determined that the Subbasin is not exhibiting significant impacts with regard to the applicable sustainability indicators defined by SGMA, including lowering of groundwater levels, depletion of groundwater in storage, degradation of groundwater quality, and depletion of interconnected surface waters**.

(Staff Report p. 50-51 (emphasis added.))

This is inconsistent with the Napa Valley Subbasin Groundwater Sustainability Plan's (GSP) recent assessment, published in January 2022:

> Groundwater levels reflect the amount [of] groundwater in storage and the movement of groundwater. Monitoring data exhibit generally stable long-term trends, although conditions are largely dependent on seasonal precipitation input. **Several wells** located near the Napa Valley Subbasin margin in the northeastern Napa area, southwestern Yountville area, **and southeastern St. Helena** area show

[1] "LU2.6 Allow residential density at the higher end of the permitted range for single family development within Medium and High Density Residential Land Use designations as long as the development character of the single family area is maintained, including lot widths, orientation to street, building heights, onsite parking, traffic, and noise, among other considerations." (2019 General Plan.)

[2] "CR1.4 Develop and use, in addition to intersection level of service standards, performance measures that consider all road users to determine transportation impacts of new development." (2019 General Plan.)

[3] DEIR Appendix K, p. 36 Table 7 (emphasizing worsening delay at Main Street/Pope Street - Mitchell Drive, but ignoring change in AM Peak LOS at Silverado Trail/Pope Street from LOS C to LOS E.)

> periods of **groundwater decline** during times of drought. Continued monitoring of groundwater levels will be important to evaluate future hydrologic and climatic influences.

(Napa Valley Subbasin Groundwater Sustainability Plan Summary, Executive Summary (Jan. 2022) p. 2, *available at* https://www.countyofnapa.org/DocumentCenter/View/23549/GSP_Executive-Summary-Abstract?bidId=.)

Indeed, while the GSP consists of a dozen separate sections, plus an Executive Summary and an Executive Summary Abstract, this critical contradictory information is found on the top of the second page of the Executive Summary Abstract –the simplest and first document of the GSP. (See https://www.countyofnapa.org/3218/GSP-Sections.) It is indeed one of the most prominent findings of the GSP that wells in southeastern Saint Helena are showing evidence of groundwater decline during this ongoing drought.

Thus, the proposed contrary finding on this critical matter not only is not supported by substantial evidence, it is directly contrary to the most recent information.

As a result of these findings, Napa County has recently substantially revised downward the allocation of groundwater to subbasin, valley-floor properties. Although such properties were previously allocated 1 acre-foot of water per acre, per year, going forward all uses will be limited to 0.3 AF/acre/year. This includes both existing and proposed wells. Any existing well usage above that level is prohibited to increase above its current net usage. (See Napa County Well Permit Standards FAQ, available at https://www.countyofnapa.org/DocumentCenter/View/25906/Well-Permit-Standards-FAQs---15-July-2022.) New domestic wells outside the subbasin may use 2 AF/year total (not per acre), and new public water supply wells may use their parcel specific recharge.4 But the well proposed to deliver the 17+ AF is not a new well.

Although the project is conditioned to require offsetting its Municipal water demand of 19.8 AF/year, no recognition of the GSP Subbasin limitations of groundwater use is made for the additional 17.16 AF/year to be pumped from the onsite well. The EIR does disclose that the well is currently inoperable meaning that the existing baseline for groundwater use is zero (DEIR 3.9-42 (Staff Report p. 594). As such the new water use proposed would be required to be limited to no greater than 0.3 AF/AC per year to comply with the GSP sustainable groundwater limitations.

However, there is no discussion of this GSP limitation and its potential impacts on rural residences and agriculture let alone any mitigation proposed or required. Instead, DEIR Appendix L, the September 9, 2021 Well Capacity Study Memorandum, referenced the prior 1 AF/AC allotment that has been reduced by 70%. Yet that memorandum emphasizes that "It is recommended that the annual groundwater use conform with County policy." (DEIR Appx. L, p.1 (emphasis in original.) (No well interference analysis appears to have been conducted either, despite the well being within 1,500 feet of the Stonebridge wells.)

[4] WAA Tier 1: Water Use for Napa County, *available at* https://www.countyofnapa.org/DocumentCenter/View/25905/Well-Permit-Standards-Applicability-Tables---15-July-2022

In sum, while the project and its EIR focused on water neutrality for its municipal use, it failed to adequately evaluate onsite groundwater pumping, the GSP current basin conditions, pumping limitations and the resulting significant impact on the environment.

Very truly yours,
DICKENSON, PEATMAN & FOGARTY

Joshua S. Devore

JSD/sol
cc: Ethan Walsh, City Attorney, Ethan.Walsh@bbklaw.com

St. Helena Citizens for a Sustainable Future

Maria Villegas
Sandra McCorkle
Ben Alderman
Elizabeth Alderman
Martha Angus
Dyan Beito
Richard Beito
Linda Brown
Ron Brown
Bernerd Buckley
Cindy Ford
John Ford
Gale Greisen
Sherri Kelly
Marina Lavagnino
Katie Leinen
Sandra Lowry
Isobel Luria
John Milliken
Ann Nevero
Jan Oddy
Anne Offord
Becky Palmisano
Dave Palmisano
Laura Pohlen
Patrick Pohlen
Laurence Schlatter
Rene Schlatter
Dave Valentine
Dave Wilkinson

DP&F
ATTORNEYS AT LAW

JOSHUA S. DEVORE
jdevore@dpf-law.com

October 31, 2022

Via Email:

Commissioner John Ponte, Chair, jponte@cityofsthelena.org
Commissioner Daniel Hale, Vice Chair, dhale@cityofsthelena.org
Commissioner Autumn Anderson, aanderson@cityofsthelena.org
Commissioner Marika Rothfeld, mrothfeld@cityofsthelena.org
Commissioner Rosaura Segura, rsegura@cityofsthelena.org
Commissioner Christopher Warner, cwarner@cityofsthelena.org

City Manager Anil Comelo, acomelo@cityofsthelena.org

Community Development Director Maya DeRosa, mderosa@cityofsthelena.org

RE: Hunter Subdivision Project Tentative Map No. 2022-001, File #PL10-040

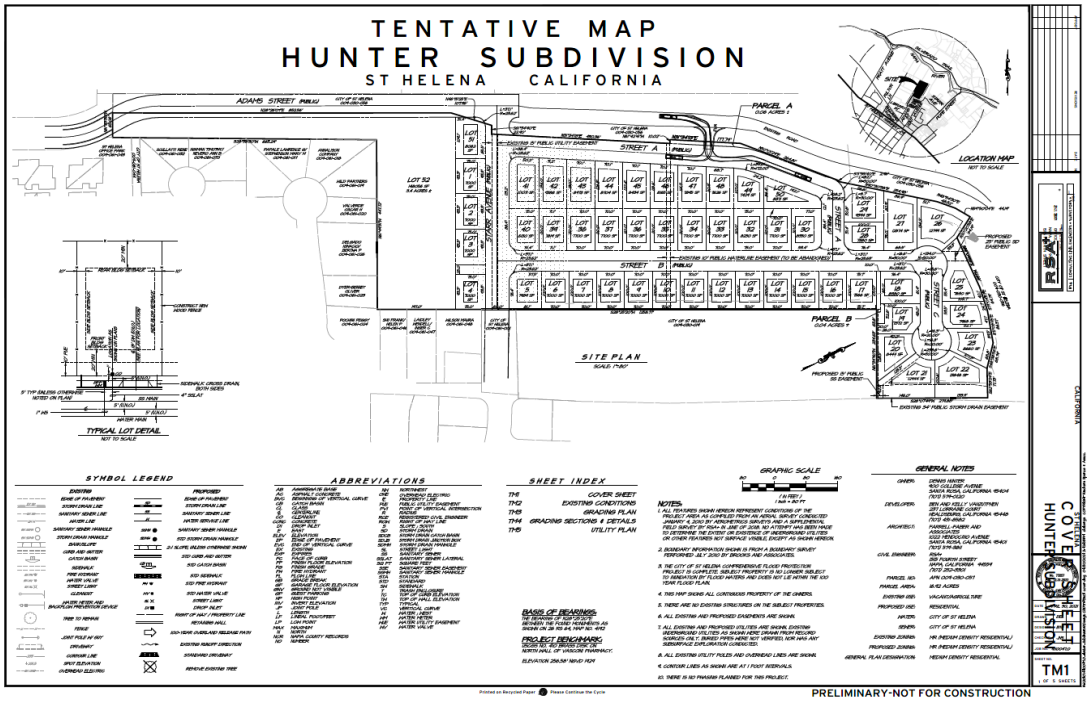
Dear: Chair Ponte, Commissioners, City Manager Comelo, Community Development Director DeRosa:

We represent the Saint Helena Citizens for a Sustainable Future, a diverse group of City residents who are extremely concerned by the City's actions with respect to the referenced project. Numerous members of the Citizens group have individually commented on the project in the past. They write now collectively due to their concern with what appears to be an imminent basic failure of the City to follow its own law.

Before the Planning Commission is a request to certify the EIR and approve a Tentative Map for the Hunter Subdivision project. This letter addresses the latter, the requested approval of the Tentative Map.

The presented Tentative Map, Attachment 3 to the Staff Report (TM 2022-01), does not comply with either the City's Subdivision Ordinance, Zoning Code nor the General Plan. It is important to note that the Planning Commission is **not** acting on any conceptual map that was presented in the EIR. Rather, as far as consideration of the approval of the Tentative Map, TM 2022-001, Attachment 3 is the actual Map the Commission is to act upon.[1]

[1] We also note that it appears from public records that the property was sold to White Fang Properties, LLC in June 2021, but such sale was not recorded until earlier this month. (Napa Recorder Doc. 2022-0018523, June 2, 2021 Grant Deed from Dennis R. Hunter to White Fang Properties, LLC, a South Dakota LLC, recorded October 10, 2022.) It is thus not clear who the proper applicant is, and whether the property owner is a party to the application. There is no reference to White Fang Properties anywhere in the nearly 3,000-page agenda packet. It appears at least that the Owner information on the proposed Map is incorrect.



This Tentative Map is fatally defective and must be rejected.

Violation of Subdivision Ordinance Section 16.04.120

> The Staff Report describes the project for consideration as follows:
>
> The proposed project being considered by the Planning Commission at this time is a Tentative Subdivision Map to subdivide an approximately 17-acre parcel of land in the eastern area of the city, east of the existing terminus of Adams Street. The proposed subdivision would create lots for 51 single family homes, and a separate parcel (lot 52) on which multi-family attached housing units would be built. The proposed Tentative Subdivision Map is included as Attachment 3 to this report.
>
> The applicant proposes to include Accessory Dwelling Units (ADUs) with 11 of the 51 single family homes. The Commission should note that the applicant has not yet filed an application for any specific development project; this would be done after the approval of the tentative map and recordation of the Final Map (following approval of an Affordable Housing Agreement and compliance with other relevant tentative map conditions). **Approval of the tentative subdivision map would only provide for the subdividing of the property; future applications would define the exact development that would take place on the lots created by the subdivision**.

(Staff Report, p. 19, emphasis added).

This is expressly illegal.

Title 16 of the Saint Helena Municipal Code, the City's Subdivision Ordinance, provides unambiguously that:

> All applicants for tentative maps and tentative parcel maps **shall concurrently submit applications for all other discretionary approvals**, including but not limited to, conditional use permits, variances, rezonings, and general plan amendments.

(Subdivision Ord., § 16.04.120 (emphasis added.))

The recognition by staff that "future applications" are required renders the submission incomplete, and directly contrary to Section 16.04.120's mandate that the requests be made "concurrently." Such a system makes perfect sense, as otherwise it is impossible to consider the whole of the project.

In short, Applicant's proposal that 'we will figure out the rest later' is expressly counter to the City's Subdivision Ordinance, and requires rejection.

Violation of Subdivision Ordinance Section 16.16.020

As a result of what appears to be a 'get one foot in the door' tactic, the submitted Map is objectively deficient, and fails to comply with the City's Tentative Map requirements. Section 16.16.020 of the Subdivision Ordinance dictates the requirements for a Tentative Map. It requires that numerous specific "proposed design elements and improvements shall be shown on the tentative map or described on an attached written statement,[2]" including that:

> The proposed **use of each** lot, lot layout and dimensions and area of **each** lot. Engineering data shall show the approximate **finished grading of each lot**, the preliminary design of **all grading**, the **elevation of proposed building pads**, the top and toe of cut and fill slopes to scale and number of each lot.

(Subdivision Ord., § 16.16.020 C.3.) However, the Map presented for approval shows nothing in Lot 52. No usage of Lot 52 is shown (*See* Map Sheets TM1, TM3.) No finished grading of Lot 52 is shown. (*See* Map Sheet TM3.) No elevation of Lot 52 building pads is shown. (*Id.*) While these details are included for the remaining lots, Lot 52 is blank. As such, the Map does not comply with the Subdivision Ordinance's requirements to detail **each** lot, unless Lot 52 is actually proposed to have no development.

Indeed, the presented Map Sheet TM2 shows the current use of Lot 52 as vineyard. As no changes to Lot 52 are proposed, assuming that the Map presented actually complied with Section 16.16.020, it would designate Lot 52 as open space. (Subdivision Ord. § 16.16.020 C.6.) Nothing on the Map, nor any attachments or plan notes that are actually presented for approval, designates any other usage, grading, elevation or other change to Lot 52.

[2] There is no "attached written statement;" only a suggestion of a future submission detailing the actual development to be proposed.

While the Staff Report suggests that there may be a **future** specific description of 25 units of attached multi-family housing presented, no description has been provided for consideration or approval. To the extent different usage and grading of Lot 52 is proposed, it "shall" be included on the Tentative Map. Given the conflict between the Staff Report, Applicant's apparent future plans, and the Map presented, it is plain that the Map presented for approval does not comply with Section 16.16.020 and must be rejected.

Violation of General Plan and Zoning Code

As such, the Map under consideration details a subdivision containing the required details only for 51 developed lots, and one open space lot. Those lots are proposed to consist of 51 Single Family Homes, and 11 Accessory Dwelling Units (ADUs). The Map under consideration thus provides plans for 62 units on the 16.92-acre parcel.

The parcel is zoned Medium Density Residential (MR) and designated as MDR in the General Plan. As correctly noted in the Staff Report:

> The MDR designation provides for single-family detached and attached homes, secondary residential units, public and semi-public uses, and similar and compatible uses. Residential densities shall be in the range of 5.1 to 12.0 dwelling units per gross acre.

(Staff Report pp. 15-16.) The Map that is actually presented for consideration provides for a density of only 3.66 units per acre (62/16.92). It must be rejected as not complying with the Zoning Code or General Plan.

While Applicant appears intent to have the Planning Commission bless a future, unsubmitted project, that is not within the Commission's power. The Planning Commission can act only on what is actually presented to it for consideration, and what has been presented does not comply with the Zoning Code or General Plan. Because the Planning Commission's function is to evaluate the projects' conformance with the Zoning Code and General Plan, it is required to reject the Map as presented.

There appears to be a suggestion that the Commission could provide Conditions that the Applicant must demonstrate by future actions that the project satisfies the General Plan. (*Compare* Proposed Condition of Approval (CoA) 14 ("The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance.") *with* CoA 27 (a future "Affordable Housing Agreement shall demonstrate how the project satisfies the minimum density requirement of the General Plan.") (Staff Report pp. 143-144.)

But the Planning Commission is required to make a finding that "the proposed subdivision, together with the provisions for its design and improvement, **is** consistent with the general plan, any applicable specific plan, and other applicable provisions of this code." (Subdivision Ordinance § 16.16.080 (emphasis added.)) At its most generous, the record suggests only that the subdivision **could** be compliant with the minimum density if future actions are taken.

Indeed, the very first element of the General Plan Consistency Analysis provides that "Conformance with the required General Plan density **will** be confirmed at the time an Affordable Housing Agreement and development plans are submitted for review and approval." (Staff Report Attachment 4, p. 165 (emphasis added.)) That is not sufficient to make the finding required for approval that the project **is** compliant now.

Most concerningly, that same analysis element cryptically states that "If constructed with these types and numbers of units, the project would conform with the minimum density required by the General Plan. **There are other alternative scenarios which would achieve the minimum density; the proposed subdivision map does not preclude achieving the minimum residential density required by the General Plan**." (*Id.* (emphasis added.)) That analysis is based on a hypothetical scenario of 51 single family homes, 11 ADUs, and 25 multi-family units. But as no multi-family development on Lot 52 is actually shown on the tentative map (but all of the other lots are described), the analysis apparently suggests that perhaps the applicant could instead build 51 single family homes with 36 ADUs using the proposed map. But there is no way to know, because the submission does not comply with City Subdivision Ordinance.

Certainly, a finding merely that the project is not precluded from meeting the General Plan is not what the City code envisions. The Commission must make a finding that the project **is** compliant. As the Map that is before the Commission does not, as currently presented, meet the General Plan or Zoning Code requirements, it must be rejected.

Conclusion

The Saint Helena Citizens for a Sustainable Future are not anti-growth. They are in favor of responsible City management, informed decision making, and adherence to law. They are concerned with the environment, and equity in development. The proposed project that has been presented is for large lots for single family homes. A number of those lots would have income-producing ADUs, for the single-family homeowners to profit by.

The members of the Citizens group are unable to fully consider the project however, as no actual proposal for low-income or multi-family housing units has been presented. But it appears the Applicant will relegate such development to a corner of the property, rather than fairly disperse them throughout a development that evenly complies with the General Plan and Zoning Code density requirements. The project's proposal appears to destroy an existing vineyard with the (unspecified future) multifamily units to bulk up the unit count on a development that does not comply with the General Plan or Zoning Code density requirements.

This is directly contrast to 1993 General Plan Policy 4.3.5:

> Require future residential development to conform to the pattern and density of older, neighboring areas of town in order to complement existing town character **and ensure that densities are high enough to protect against unnecessary incursion into vineyard agricultural areas**.

(1993 General Plan Policy, Staff Report p. 166 (emphasis added.)) Current General Plan Policy 3.1 is functionally identical. ("Require future development to conform to the pattern and density of the neighboring areas. In order to complement existing town character and protect against incursion into vineyard agricultural areas." (Staff Report p. 180.))

Thus, the project – a large non-conforming subdivision with a potential future, dense multifamily parcel to compensate – should not simply be deferred for further consideration of the missing multi-family elements, but it should be rejected in its entirety.

Very truly yours,
DICKENSON, PEATMAN & FOGARTY

Joshua S. Devore

JSD/sol

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Dear Members of the City Planning Commission of St. Helena,

I am writing regarding the Hunter Project Final Environmental Impact Report (FEIR). I am writing to express serious concerns about the findings of the report and, more importantly, all of the considerations that are **missing from the report**. In particular I am **extremely concerned** about the **lack of consideration of the environmental impacts with regard to climate change**. Instead of taking into account the changing landscape of future impacts on such issues as water, infrastructure, and natural disasters, **this EIR uses old data, outdated reports, and irrelevant projections** based on assumptions about the climate staying the same as it always was, of water availability staying predictable, of flood risks fitting outdated "100-year flood plain" approaches that are no longer being used by the Federal Emergency Management Agency (FEMA), and sewage capacity and other reports based on outdated materials such as reports from as long ago as 2008 and 2011. I expressed my concerns about these issues one year ago when the draft EIR was being reviewed. **The city has failed to address these concerns** and greenlighted the process through to the Final EIR without consideration of the impact of these issues on our community.

*I reiterate my concerns here and request that the city planning commission and city council address these issues forthwith as it appears to me that **failure to address these concerns constitutes grounds for legal action***. I would like to bring to the city's attention recent advancements with regard to the **legal liability of ignoring climate change in development projects** and point the city council and planning commission members to a report prepared by the Conservation Law Foundation entitled "Climate Adaptation and Liability" https://www.clf.org/wp-content/uploads/2018/01/GRC_CLF_Report_R8.pdf. I urge the city council to carefully consider the consequences of ignoring and dismissing the issues that have been raised here with regard to the failure of the Hunter Project FEIR to take into account changing climate-related impacts on the city's ability to provide adequate, safe water supplies, to ensure safe evacuation during wildfire events, especially on the East side of St. Helena, and to account for the financial liability that would occur if the levy should fail in a catastrophic flooding event.

I am aware that the city is obligated to comply with the Housing Accountability Act (Government Code Section 65589.5), which states that a housing development project that

complies with the objective standards of the General Plan and Zoning Ordinance must be approved by the City, unless the City is able to make written findings based on the preponderance of the evidence in the record that either: (1) the City has already met its Regional Housing Needs Assessment (RHNA) requirement; (2) there is an impact to the public health and safety and this impact cannot be mitigated; (3) the property is agricultural land; (4) approval of the project would violate State or Federal law and this violation cannot be mitigated; or (5) the project is inconsistent with the zoning and land use designation and not identified in the General Plan Housing Element RHNA inventory. I believe that it is clear given the concerns raised below that **there is an impact to the public health and safety of the proposed development project that cannot be mitigated given the current city infrastructure limitations, and the increased and unaccounted for impacts of climate change.**

Here I address several specific comments in response to the Planning Commission Report (file number PL10-040 and TM 2022-001) Section 1 "Findings regarding less than significant impacts not requiring mitigation."

1) Regarding section H5: Emergency Access
    a. The "less-than-significant impact" finding explanation does not address the actual concerns regarding emergency evacuation. The project would most definitely have an impact on the ability of all current residents of the East Side of St. Helena to evacuate in an emergency situation such as a catastrophic flood or wildland fire. The explanation that the city fire department will evaluate the width of the roads to be constructed inside the development has nothing to do with actual evacuation out of the city of St. Helena itself. The question is not whether the development would adequately provide access for the development residents out of the development area, but how the project will impact those residents once they leave the development, and the rest of the citizens of St. Helena who all need to evacuate via the same limited routes out of the city and out of the valley. Once the hundreds of additional residents occupying hundreds of additional cars actually drive out of the development, they are going to have to funnel into the existing roadways, which are already impacted and cannot adequately handle evacuation in an emergency situation such as a quickly occurring wildland fires or catastrophic floods. They will all have to drive down Starr Avenue, make a left turn onto Pope Street, and then try to evacuate across the Pope Street Bridge, a historic bridge which is not capable of handling even the current number of cars that need to be able to evacuate out of the area. If they choose to turn right to try to evacuate out via Main Street, they will be competing with all of the West side traffic that is also trying to evacuate out of the city. An even worse scenario is what would happen if only one of those two routes was available for some reason. Additionally, **the FEIR does not in any way address the increased urgency and frequency at which these types of catastrophic events are occurring and are going to be occurring with the increasing effects of climate change**. The East side of town already houses the most vulnerable citizens in our city, encompassing multiple low-income housing

units and homes for the elderly. These are individuals who are not only at higher risk from injury but who are also less likely to be able to "evacuate early" as opposed to at the last minute once emergency shelters have been established, making the impact of urgent, las-minute evacuations even more important.

b. Please also see additional text in points 8) and 9) below, highlighting that the estimated increase in number of residents due to the development is laughably unrealistic, and apparently assumes that only about 200 additional residents will result from a development containing 87 units, when a much more realistic calculation is that instead there will be >400 new residents. With more than 2 times higher impacts on the ability of St. Helena residents to safely evacuate in an emergency situation.

2) Regarding section H6: Wildland fires
   a. The finding of "less-than-significant impact" explanation here is also missing the main point. As above, the question is not whether the construction or operation of the project will impact the ability of the development residents to egress out of the development itself, but how these residents will evacuate out of town once they have left the development itself, and how these additional numbers of individuals and cars will impact the ability of the rest of the citizens of St. Helena to evacuate in the case of a wildland fire emergency. Again, we have examples of recent wildland fires, which were all fast-moving, and which can occur in the middle of the night, for example, that raise concerns about the ability of hundreds of residents to evacuate out via our currently inadequate infrastructure. Again, this finding **ignores the increasing risks of wildland fires due to climate change**.
   b. Please see additional text under section B below.
   c. Please also see additional text in points 8) and 9) below, highlighting that the estimated increase in number of residents due to the development is laughably unrealistic, and apparently assumes that only about 200 additional residents will result from a development containing 87 units, when a much more realistic calculation is that instead there will be >400 new residents. With more than 2 times higher impacts on ability to safely evacuate during a wildland fire event.
3) Regarding section I2: Groundwater supplies
   a. Again, the "less-than-significant impact" finding **ignores the effects of climate change**. Instead, the assessment relies on historical data and outdated processes of evaluation based on the past. Climate change is the present and the future. We are currently in a water shortage, with water restrictions mandated by the city, due to our inadequate water infrastructure but also due to the simple fact that groundwater is running out everywhere in the state of California.
   b. Please see additional text under section C below, with particular attention to the impact of climate change on groundwater supplies throughout the state of California and the decreasing water supplies to replenish those groundwater supplies due to decreasing snowpack in the Sierras.
   c. Please also see additional text in points 8) and 9) below, highlighting that the estimated increase in number of residents due to the development is laughably

unrealistic, and apparently assumes that only about 200 additional residents will result from a development containing 87 units, when a much more realistic calculation is that instead there will be >400 new residents. With more than 2 times higher impacts on groundwater supplies than estimated by the FEIR.

4) Regarding section I4: Surface runoff and flooding
    a. Again, the FEIR **ignores the impact of climate change**. Please see text below under section A. Please note that the Federal Emergency Management Agency (FEMA) is no longer using the concept of "100-year flood zones" because climate change has rendered these calculations based on historical data meaningless. The new Risk Rating 2.0 system has been in effect since October 2021.
5) Regarding section I5: Stormwater drainage system capacity and polluted runoff
    a. Again, the FEIR **ignores the impact of climate change**. Please see text below under section A. Please note that the Federal Emergency Management Agency (FEMA) is no longer using the concept of "10-year flood zones" because climate change has rendered these calculations based on historical data meaningless. The new Risk Rating 2.0 system has been in effect since October 2021.
6) Regarding section I6: Flood flows
    a. Again, the FEIR **ignores the impact of climate change**. Please see text below under section A. Please note that the Federal Emergency Management Agency (FEMA) is no longer using outdated maps and terminology regarding flood areas because climate change has rendered calculations based on historical data meaningless. The new Risk Rating 2.0 system has been in effect since October 2021. Moreover, recent flooding events around the country have raised awareness about the growing, unprecedented impacts of climate change. For example, in this article published in Scientific American: https://www.scientificamerican.com/article/studies-sound-alarm-on-badly-out-of-date-fema-flood-maps/ attention has been focused on the fact that **FEMA maps are out of date** and do not fully account for the dangers of flooding in the new era of climate change. Movements are under way around the country to curtail development in flood zones. It is irresponsible to use assessments based on historical data and rating systems which are no longer valid.
7) Regarding section I7: Conflict with water quality control plan or sustainable groundwater management plan
    a. Again, the "less-than-significant impact" finding **ignores the effects of climate change**. Please see additional text under section C below, with particular attention to the impact of climate change on groundwater supplies throughout the state of California and the decreasing water supplies to replenish those groundwater supplies due to decreasing snowpack in the Sierras.
    b. Please also see additional text in points 8) and 9) below, highlighting that the estimated increase in number of residents due to the development is laughably unrealistic, and apparently assumes that only about 200 additional residents will result from a development containing 87 units, when a much more realistic calculation is that instead there will be >400 new residents. With more than 2 times higher impacts on groundwater supplies than estimated by the FEIR.

8) Regarding section N3: Education
    a. It is unclear how a project that will produce 87 housing units is supposedly only going to include 28 students. The calculation does not make sense and clearly assumes for unexplained reasons that only a third of the housing units will have any child in them, and those units that do have children will only have one child. This is not realistic nor is there are rationale for why such low numbers of children are expected to be part of the housing development. Is the proposal for an adult community? A more realistic calculation is that 80% of the household will have children and that of those, there will be an average of 2 children per household, bringing the likely number of children that would need to be accommodated in the school district up to 140. In fact, given the high cost of living in the Napa Valley and in the city of St. Helena itself, families often live at much higher density than even this more realistic calculation. In fact, an even more realistic calculation is that closer to 90% of the households will have 5-6 people per house, with 3 of those being children, bringing the potential increase in students in the school district up to 234, 10 times more than suggested by the FEIR.
9) Regarding section N5: Other public facilities
    a. Again, it is unclear how the estimate of 213 residents within the 87 housing units has been calculated. This very unrealistic, low number assumes that most of the households will be occupied by only 2 people, with only less than half (39) of the households having one child residing with the two other individuals. First of all, this calculation already demonstrates that the estimate of the number of children in section N3 of 28 is lower than expected, even by the extremely unrealistic calculations of a total of 213 residents across 87 units. A more realistic and still fairly conservative estimate is that 80% of the households will have 4 people in them, with the rest having 2-3 individuals, for a total of closer to >300 residents. An even more realistic calculation, as explained above under point 8) is that households will in fact be much more densely inhabited at occupancy rates of 5-6 individuals per household, bringing the total number of residents up to >400.
10) Regarding section O1: Existing facilities
    a. Please see above under point 9): the estimate of 213 residents is unrealistic. There are likely to be upwards of >400 new residents in the city due to the development.
11) Regarding section P1: Consistency with circulation performance plans
    a. The finding of “less-than-significant impact” is unsubstantiated by any kind of accounting for the actual increase in the number of residents and therefore also cars that would result from this development. Please see points 8) and 9) above, pointing out that the estimated number of approximately 200 new residents is laughably low and a more realistic number is >400 new residents, with as many as 300 new cars on the roads in the city of St. Helena.
12) Regarding section P2: Transportation hazards

a. The finding of “less-than-significant impact” is unsubstantiated by any kind of accounting for the actual increase in the number of residents and therefore also cars that would result from this development. Please see points 8) and 9) above, pointing out that the estimated number of approximately 200 new residents is laughably low and a more realistic number is >400 new residents, with as many as 300 new cars on the roads in the city of St. Helena.
b. Again, as discussed in point 1) above, the main concern is not simply whether the roads within the new housing development will be wide enough for the new residents to be able to safely drive out of during an emergency, but what happens to all those new additional people and cars once they get onto the current city streets, which can barely accommodate even the current number of cars driving on them, with potholes and street maintenance severely behind a normal maintenance schedule. Many of our streets, including Hunt Ave., are so severely rutted as to be like driving on a dirt road, with the unfortunate effect that cars must drive slowly to avoid damage, further complicating evacuation during an emergency situation, especially with as many as 300 additional cars needing to evacuate on already congested roadways.
c. One needs only look at the current street parking situation on the stretch of Starr Ave. between Pope St. and Hunt Ave. to realize that of course the parking situation with this new development will be a major problem. Again, the EIR assumes a laughably low number of additional residents and cars from this development. All one has to do is look at how many additional cars beyond what was planned for the Hunt’s Grove apartment complex are currently being parked on Starr Ave. A similarly much higher density of vehicles needing to overflow onto street parking would occur with this new development, increasing the risks and hazards of collision, and increasing impacts on current street and traffic flows. Again, the biggest concern is what happens under the increasing threat of catastrophic natural disasters and the ability of all St. Helena residents, current and future, to safely evacuate in an emergency.

13) Regarding section P3: Emergency access
a. As discussed previously under points 1), 2), 11) and 12) this “less-than-significant impact” finding **ignores the effects of climate change** on the increased likelihood, severity, and urgency of natural disasters and the ability to safely evacuate out of the city on currently inadequate road infrastructure which is not capable of accommodating even the current residents, and it also severely **underestimates the number of new residents and cars that would result from the development**.

14) Regarding section Q1: Utilities and infrastructure
a. Please see points 3)-7) above detailing the failure of the EIR to account for the effects of climate change on the calculations for effects on water supplies, as well as points 8) and 9) regarding the obvious micalculation of the realistic number of additional residents that would result from the housing development, and the potentially 2 times higher impact on water, wastewater, and other utilities and infrastructure.

15) Regarding section Q2: Sufficient water supplies
    a. The finding of "less-than-significant impact" on the water supplies, again, completely **ignores the effects of climate change**. All of the estimates put forth in the document simply state that there will be sufficient water supplies in the future to accommodate the new development, citing data from 2013 and 2016, which we all know are now completely meaningless and outdated. The city is currently in an emergency water shortage due to failing infrastructure. Beyond that, climate change is permanently and irreversibly changing the groundwater and reservoir supplies that we rely on. The calculations of water needs and Safe Yield are all based on outdated, historical information which does not account for actual decreases in water yields and replenishment of both reservors and groundwater due to climate change. Please see section C below detailing new information about the dwindling water supply from shrinking Sierra snowpack over the last several years and increased demand for water from growing populations.
    b. In addition, please see points 8) and 9) above, highlighting the inadequacy of the calculations pertaining to the increase in the number of residents that would result from the new development. It is likely that instead of about 200 more residents there will in fact be more like 400 new residents, thereby increasing the water demand to double what was projected, **since water demand is, rightly so, based on number of people per household rather than number of households**.
16) Regarding section Q3: Wastewater treatment capacity
    a. Please see points 8)-9) above regarding the miscalculation of the real number of residents that would result from the development (i.e. double the estimate). The finding of "less-than-significant impact" does not account for this miscalculation in the actual increase in the number of residents that would occur with the development, and instead uses an extremely unlikely and very low estimate of the number of people per household that would result.
17) Regarding section R1: Impairment of adopted emergency response plan or emergency evacuation plan
    a. Please see points 1), 2), 11), 12) and 13) above: the finding of "less-than-significant impact" **ignores the impacts of climate change** and does not account for the current inadequacy of city infrastructure on the ability of both the new residents and current residents to safely evacuate out of the city during an emergency.
    b. Please also see points 8) and 9) above: the "less-than-significant impact" relies on a flawed underestimate of the actual increase in number of residents that would result from the development.
18) Regarding section R3: Infrastructure-related wildfire risks
    a. Please see points 1), 2), 11), 12) and 13) above: the finding of "less-than-significant impact" **ignores the impacts of climate change** and does not account for the current inadequacy of city infrastructure on the ability of both the new

residents and current residents to safely evacuate out of the city during an emergency.

b. Please also see points 8) and 9) above: the "less-than-significant impact" relies on a flawed underestimate of the actual increase in number of residents that would result from the development.

19) Regarding section 3A1: Air quality management plan consistency

a. The finding that there will be an unavoidable impact on vehicle miles traveled (VMT) is still underestimating the full scope of that impact given the underestimate of the number of residents and vehicles that would actually result from the development, as pointed out in 8) and 9) above.

Climate change is happening. We all know it and have lived it and seen it over the last several years. Each fire season is worse than the last, each winter is warmer than the last, each year the weather patterns become more unpredictable. The recent conclusion from the United Nations Glasgow Climate Change Conference (COP26) meeting is that even if all countries that pledged to fully implement changes needed to meet agreed upon greenhouse gas reduction goals are actually able to meet those goals, we are still on a trajectory to see increases in the earth's temperature of at least 1.8 degrees Celsius (https://www.washingtonpost.com/climate-environment/2021/11/09/cop26-un-emissions-gap/). This means that the recently experienced natural disasters in our area including wildfires, flooding, mud slides, and droughts, are only going to be more frequent and exacerbated over the next 10-20 years and beyond.

What were once "100-year flood areas" will now effectively need to be renamed "it could flood any time" areas, highlighting the issue of the levy and the fact that **the Hunter project is in a high-risk flood zone**, which is inadequately addressed in the EIR. Furthermore, more frequent wildfires, as we have seen recently, will require more frequent evacuations, thus **public safety and transportation during emergencies and natural disasters** is another area that was not adequately addressed by the EIR. Finally, we are currently and in all likelihood will continue to experience droughts of unknown severity and duration and **we barely have enough water for the current citizens of St. Helena**, and this threat to our future water supply is inadequately addressed in the EIR. I have addressed each of these issues, as well as several additional issues in my comments below.

A. The Hunter Project is in a flood zone behind a levy that is NOT supported by federal funds, and when the levy fails and the homes within the project are flooded the residents of the city of St. Helena will be fully responsible for paying for repair of the levy and all the damage to the homes.

For the first time in 50 years the Federal Emergency Management Agency (FEMA) is changing its flood insurance program to better reflect the real risks associated with flooding in certain high-risk zones, and that take into account climate change. **The entire idea of "100-year flood" zones is now outdated and no longer being used** because it uses outdated projections about yearly percentage risk of flooding based on irrelevant, old information about weather patterns over the last 100 years. The new Risk Rating 2.0 is instead tailored to each individual property, and is designed to "adapt and re-adjust rates based on a changing, unpredictable climate,"

clearly highlighting the fact that **the risk of catastrophic floods and failing levies in certain high-risk areas is so volatile as to be unpredictable** (https://www.houstonpublicmedia.org/articles/news/energy-environment/2021/06/24/401402/femas-changing-its-flood-insurance-program-heres-how-it-will-impact-texans/). The new approach also takes into account more causes and types of flooding, including storm surge, river overflow and heavy rainfall, because **climate change is increasingly and unpredictably leading to flooding due to heavier rain falls, sea-level rise, and stronger wind and storm weather patterns**. The new risk rating policy is in effect starting October 1, 2021 for any new projects (https://www.fema.gov/flood-insurance/risk-rating). This is **brand new information that is not in any way reflected in the EIR** and in fact, all of the material in the EIR with regard to the fact that this project is in a high-risk flood zone, behind a levy that is city-managed and maintained rather than being maintained by the Army Corps of Engineers, is completely ignored by the EIR.

According to the official FEMA map of the city of St. Helena, the Hunter Subdivision project is clearly within a flood zone (https://map1.msc.fema.gov/firm?id=06055C0264E). Although the city paid for consultants to try to mitigate this risk by providing independent evaluations that take into account the mitigation of the flood risk due to the existence of the levy, as I pointed out above, this all goes out the window **with the current increased risks we are facing due to climate change**. How does the city plan to provide and pay for the rescue of hundreds of additional citizens in this high-risk area, repair the failed levy and all the damaged homes WHEN (not if) there is a catastrophic flooding event, possibly as early as within the next 5-10 years? The unfortunate truth is that this parcel of land is in a flood zone. The entire parcel was purchased for a laughably low amount that currently cannot get you an average 2-bedroom, 1-bathroom home in this town. **This parcel was sold cheap, because it should never be built on. A levy was constructed against the recommendation of the Federal government**, which walked away from the project because it is not a good idea to build homes in a flood zone, and **the city of St. Helena and its residents are entirely financially responsible for the maintenance, repair, and when needed, re-building of the levy when it fails.** Where is the accounting on the financial implications of such an undertaking and the environmental impact of such a financial burden on the city and its citizens? Not to mention the financial toll on the people who will have bought these houses falsely deluded into thinking that they were “safe” behind the levy? The simple truth is that levies fail. Even a brand new, world-class levy built by the Army Corps of Engineers to protect the city of New Orleans failed a *second time*, after it was professionally rebuilt.

It was only last year, as we all remember so vividly, that we experienced an “atmospheric river.” Anyone who lives near the Napa River here and walked out to take a look over the bridge saw for themselves that the water rose well beyond the riverbed, and in some places flooded over the river banks. And this was, even in comparison to the atmospheric storm that we experienced last year, actually a fairly modest event. What will the next one look like? We simply do not know. But one thing is for sure: there will be a catastrophic weather event, and the levy will fail. The only question is when. The likely NEW answer, given the accelerating rate of climate change, is that it will be in significantly less than 100 years.

B. Climate change is drastically and unpredictably altering weather patterns, and the incidence of wildfires and all of their consequences, both acute and long-term, is increasing to unprecedented rates that are surpassing all predictions based on historical data.

According to the National Interagency Fire Center the state of California faced over 8,000 fires that burned over 500,000 acres of land in 2002 (https://www.predictiveservices.nifc.gov/intelligence/2002_statssumm/fires_acres.pdf). In 2020 those numbers jumped to nearly 10,000 fires that burned over 4 million acres of land (https://www.predictiveservices.nifc.gov/intelligence/2020_statssumm/fires_acres20.pdf)! The state of California is facing unprecedented increases in wildfire incidences just in the last 20 years, at a time when the earth's temperature has increased by less than 1 degree Celsius (https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature), while **the *best-case* scenario projections for temperature change, as pointed out above, are on the order of 1.8 degrees Celsius over the next 20 years, strongly suggesting that the incidence of wildfires is only going to increase**. The current EIR does not account for these increases in risk due to wildfire. This is a problem in two specific ways: 1) more fires means more evacuations and more people that need to be able to leave in a short amount of time in a limited geographic area with limited evacuation routes, and 2) more fires also means more mud slides due to deforestation and loss of vegetation, which makes our beautiful hills more susceptible to slides when heavy rains hit.

The recent wildfires in Napa Valley and Sonoma Valley are a sobering reminder of what happens when wild, unpredictable winds coincide with extreme dry conditions and ignition sources. Sometimes those ignition sources are dry lightning, other times sparking generators, other times, devastatingly, even arson. Regardless of the ignition source, which in and of itself is growing in incidence (dry lightning storms in the Napa Valley in August?), the cold, hard truth is that **due to climate change the "wildfire season" in California is increasing. More and more days out of more and more months of the year, from as early as April to as late as December, there are days when the combined conditions of extremely low humidity and high winds make this area ripe for fires to start** (https://www.latimes.com/projects/wine-country-fires-california-sonoma-napa/). The fact is that there are only two ways out of town. Highway 29 and Silverado Trail. These are both narrow, 2-lane highways that can only move so many cars out per minute, and that is if all goes well and there are no accidents from people panicking and driving recklessly.

I remember very vividly driving in the middle of the night and listening to the radio with the announcer imploring people to please drive carefully so that our only arteries out of danger are not blocked by overturned vehicles, effectively trapping everyone trying to evacuate to safety. We have no right to endanger the people who already live in this town by building a large development that would add as much as 10% to our overall population in the city, with **an even higher impact on the residents on the East side of town, where the population density is already higher and the population is already more vulnerable, with multiple apartment complexes and low-income housing areas housing our town's low income residents and seniors**, including Hunt's Grove apartments, Stonebridge apartments, the Silverado Orchards Retirement apartments, and the Vineyard Valley Mobile Home Park 55+ community.

This is not the part of town where half of the homes are second homes that sit unoccupied most of the year. **The East side of St. Helena where the Hunter parcel is located is the part of town where there are more people per square mile that need to be able to evacuate in an emergency.** The **EIR already concedes that the one environmental impact that cannot simply "be mitigated"** as has so conveniently been done with all of the other potential impacts, **is the unavoidable impact on traffic.** Phrasing it as a simple "traffic problem" makes it seem like just a minor nuisance. This is not about us having to wait a few extra minutes to make a left turn onto Pope Street when we are trying to get to work on a Monday morning. **This could mean the difference between a family being able to evacuate to safety in time, or not being able to do so** because they are stuck in traffic with 500 more people than should be living here all trying to leave their homes at the same time. And make no mistake this is also an equity issue: the very people who are the most likely to have to wait until the last minute to evacuate and thus be in danger when traffic is backed up and they cannot evacuate from fire, are those who do not have the funds to evacuate earlier than "necessary" because they cannot afford to simply pay for a hotel for days on end.

It is also critical to consider that the only way out, on one of only two roads out of town via the Silverado Trail for residents of the East side of town, is **the Pope Street bridge. A historic, narrow, completely inadequate bridge** that if even one car failed, crashed or overturned while trying to drive across, would completely cut off this evacuation route, and **redirect all traffic from the East side of town onto Highway 29**. It is difficult to envision how such an accident could even be remedied in a situation such as this, given that the bridge is barely wide enough for two vehicles to drive across, with no shoulder at all for emergency vehicles to be able to approach. **It is easy to see how very quickly this very real danger of too many vehicles on the road all trying to go the same way out in a nightmare, yet very real, and recently experienced emergency wildfire evacuation scenario, becomes not just an East side problem, but also a problem for those trying to evacuate from the West side of town.**

Just as the recent "atmospheric river" weather event increased our awareness of the high risk of flooding on the Hunter parcel, perhaps even more convincingly it reminded us of the extreme vulnerability of recent burn areas to heavy rainfall, the resulting mud slides, and the further impacts on our roads. I am sure that I do not need to remind anyone of the nightmare traffic that we experienced for nearly 3 weeks following the October 22 weather event that caused a mud slide that resulted in the closing of Silverado Trail (https://patch.com/california/napavalley/storm-takes-out-part-silverado-trail). Traffic on Highway 29, from vehicles being redirected from Silverado Trail north and south of town, was atrocious. Many residents who either needed to drive north or south out of town were dealing with traffic delays of up to 2 hours. On a normal day this is very frustrating and disruptive to work and school schedules. In an emergency situation where fast-moving wildfires necessitate immediate evacuations, a situation such as this is a devastating problem for a town that has only two roads out of town.

C. **The severe drought and water shortages we are currently experiencing in the city of St. Helena are a harbinger of even worse times to come. We simply cannot support a large development which will drastically increase water demands on an already**

strained and inadequate system that can barely supply enough water to our current residents.

Unfortunately, our water shortage problems here in St. Helena are happening all over the state. **Wells are running dry** (https://calmatters.org/environment/2021/08/california-groundwater-dry/). Despite changes to California ground water laws in 2014 to enact sustainable practices that protect ground water, seven years later wells around the state continue to run dry. Current climate change projections, as outlined already above, are dire, and suggest that drought severity, intensity, and duration will only worsen over the coming decades. We simply cannot rely on old projections about water availability because we are in uncharted territory. Our ground water sources are not being normally replenished. The normal water cycles are not operating the way they used to. And it is not just wells that are running dry.

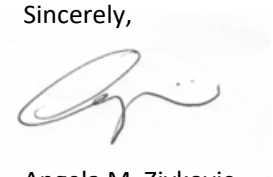
Snowpack in the Sierras normally "supplies about 30% of water statewide when the spring melt comes and water runs off to be captured in the state's system of reservoirs" (https://www.sfgate.com/bayarea/article/Sierra-snowpack-satellite-image-atmospheric-river-16568005.php). But last year's snowpack was only 59% of average, and even more disturbing and unexpected was the fact that 80% of the already lower than normal, predicted water runoff was simply soaked up or evaporated because the soils were so hot and dry, severely impacting water levels in reservoirs across the state. Even after the "atmospheric weather" event in October which brought heavy rains and a rise of over 20 feet to Lake Oroville, for example, according to the Department of Water Resources, this reservoir is at only 27% capacity. So it is **not just our ground water and wells that are drying up, our Sierra snowpack, and thus reservoirs and rivers are also drying up.** As mentioned earlier, climate change means that we are experiencing more and more warmer and warmer days, and this means that **even if we do get big storms the snowpack does not stick around, and even when we do get runoff from the snowpack, the earth is so parched that the water simply disappears on its way to our reservoirs.**

Our own reservoirs and water sources are not doing so well. Bothe last summer and currently, as I am sure we are all quite vividly aware of given the astronomical water bills, we entered severe drought restrictions (Phase II Water Regulations), with water use limited per household, and very unpopular and extreme fines being put in place in an attempt to mitigate the very real risk that we could run out of water before the reservoir was replenished by winter storms. We were lucky last year, since we did happen to get the big storm in October that saved us from imminent disaster, but next time we may not be so lucky. What is our city's plan for dealing with these new, unexpected, unpredicted risks of severe and sustained drought conditions due to climate change? How do we plan to supply water to even the current residents, much less to 500 more residents if the Hunter parcel were to be developed? The current EIR does not adequately address these issues. Laughably simplistic solutions like the use of "low flow toilets" as a mitigation solution for our real water shortage issues that are only going to worsen over time, are so inadequate as to be insulting. **We cannot rely on water supplies staying what they were even in the recent past, or being predictable based on what we used to know about how much water we might expect any given year based on old weather patterns.** In fact, it is quite clear that this year's severe drought and water shortages are likely to occur with much greater frequency in the coming years and decades, as our ground

water supplies, snowpack, river flows, and reservoir levels continue to be severely impacted by climate change. The EIR does not address these very real water issues in any real way.

I request that the city planning commission address the concerns related to climate change expressed above about the inadequacy of the EIR for the Hunter parcel, and the resulting threat to public health and safety of the development project.

Sincerely,



Angela M. Zivkovic

Xinia Gamero

From: Katie Avery <mrskatieavery@gmail.com>
Sent: Tuesday, November 1, 2022 10:17 AM
To: Public Comment
Subject: [External] Hunter Subdivision FEIR

To Whom It May Concern,

We received a letter last week stating that the City Planning Commission would be considering the Final Environmental Impact Report today, November 1, 2022. We have not yet had enough time to read through the FEIR and this is a huge project that could change the city dramatically. The city has just asked its residents to conserve water as we lost a pump a few weeks ago. We cannot allow this to move forward until the residents of St Helena have had enough time to review the FEIR and comment on it. I don't believe the potential effects of the proposed project have been reduced to less than significant levels. There is absolutely no way, without changing the plan entirely, for this to happen. The residents of St Helena need more time to read through this new report and were not given any time to do that. A massive 3,000 page document needs more than a few days to review.

Respectfully,

Jake & Katie Avery
Main St & Hunt Ave

Xinia Gamero

From: jmzin@comcast.net
Sent: Tuesday, November 1, 2022 11:47 AM
To: Public Comment
Cc: jmzin@comcast.net
Subject: FW: [External] Request for a Continuance of Public Hearing Item 5.1 Beyond Tonight's Planning Commission Meeting

I would like to request that the Public Hearing for Item 5.1 be continued to a later date to be determined and that no Recommendations to the Council be made by the Planning Commission until after this continuance. This would allow the Public and the Planning Commissioners more time to evaluate the voluminous (2894 page) FEIR and respond with appropriate comments and recommendations.

The sudden release of the FEIR and rushed scheduling of the Public Hearing is not fair to the Public or the Commissioners who have a lot to absorb and respond appropriately. Also, the Commissioners will be presented with more information from the Public at the Hearing tonight that may better inform how they respond to Staff Recommendations. Community participation in the EIR process for this project is considerable as evidenced by the volume of comments to the DEIR and Public Comments submitted for this hearing.

And,..what is the hurry? This EIR has been going on for 12 years and what would be the harm in continuing this hearing until December or January allowing for a thorough and transparent review of the FEIR. I also think this would go a long way in restoring the public's confidence in participating in the EIR process and that their comments are being fairly evaluated. As it stands now, the surprise release of the monster FEIR 11 months after DEIR comments were that submitted indicated that NOT ONE further significant impact was identified. I believe over 185 people commented on the DEIR and it is hard to believe that NONE of the comments elicited a change of even one thing in the FEIR from the DEIR. It is as if the DEIR was perfect and none of the 186 comments had merit. This combined with the rushed rollout of the FEIR is a bad look for the Saint Helena Planning Department.

Personally, I know that my comments were summarily dismissed without so much as a single "you may have a point there". The public was also informed that if you want to challenge any of the City's decisions on any of these matters in court, you may be limited to raising only those issues you raised at the public hearing described in this notice in written correspondence delivered to the City prior to the hearing. I very much disagree with the responses to my comments and will be re-submitting them to preserve my right to raise these issues in court. I would also like more time to comment on the responses to my comments.

Thank you for your attention in this matter.

John Milliken jmzin@comcast.net
1256 Hudson Ave.
Saint Helena, CA 94574
Mobile/Text: 7074864266

Xinia Gamero

From: jmzin@comcast.net
Sent: Tuesday, November 1, 2022 11:54 AM
To: Public Comment
Cc: jmzin@comcast.net
Subject: [External] Resubmittal of Comments on the DEIR for the Hunter Residential Subdivision Tentative Map Application to Preserve Legal Rights to Raise Issues for Agenda Item 5.1
Attachments: 02-20-2020_unresolved_issues_and_questions_hunter-final-c2.pdf; LeveeZoneEasementMap.pdf; VB Comments GP Update.pdf

John Milliken (jmzin@comcast.net)
Mobile/Text: 7074864266
1256 Hudson Ave., St. Helena, CA 94574

From: John Milliken <jmzin@comcast.net>
Sent: Tuesday, November 30, 2021 11:59 AM
To: jmzin@comcast.net
Subject: FW: Comments on the DEIR for the Hunter Residential Subdivision Tentative Map Application

John Milliken
jmzin@comcast.net
707-963-8134 (Office) 707-486-4266 (Mobile\Text)
1256 Hudson Ave.
St. Helena, CA 94574

From: John Milliken <jmzin@comcast.net>
Sent: Tuesday, November 30, 2021 11:54 AM
To: 'mderosa@cityofsthelena.org' <mderosa@cityofsthelena.org>; 'cityclerk@cityofsthelena.org' <cityclerk@cityofsthelena.org>; 'publiccomment@cityofsthelena.org' <publiccomment@cityofsthelena.org>
Subject: FW: Comments on the DEIR for the Hunter Residential Subdivision Tentative Map Application

November 30th, 2021

FR: John Milliken

1256 Hudson Ave, Saint Helena, CA 94574

Please include my comments and attachments concerning the DEIR for the Hunter Residential Subdivision Tentative Map Application (File no. PL 10-040).

1) Planning and Zoning Code Violations

There is no mention in the DEIR of the project's numerous violations of the St. Helena Zoning Ordinance. All land use decisions must be consistent with a city's general plan and zoning ordinance. *(Collier v. City and County of San Francisco (2007) 151 Cal. App. 4th 1326, 1333, citing Gov. Code 65860, subd. (a)(2); Napa Citizens for Honest Government v. Napa County Bd. of Supervisors (2001) 91 Cal.App.4th 342, 355. See also Land Management v. Contra Costa Bd. of Supervisors (1990) 222 Cal.App.3d 950,957-958 ["issuance of a permit inconsistent with zoning ordinances or the general plan may be set aside and invalidated as ultra vires"].)* The proposed Tentative Subdivision Map and related residential construction violate the St. Helena Zoning Ordinance.

Most of the violations involve non-compliance with the City's Inclusionary Housing Ordinance, Chapter 17.146, as documented by the attached Notification of Final Unresolved Issues and Questions prepared by the City's Building and Planning Director on 2/27/2020. There were no responses from the applicant to this notification mentioned in the DEIR or listed on the Project's Planning Archive. This notification was actually the fourth sent by the City Planning Department for this second attempt at a DEIR. All four document the same Chapter 17.146 violation issues. These same issues were also brought up at the initial Public Scoping Comments Meeting held in April of 2018. With the City and the Applicant well aware of the project's violations of the Inclusionary Housing Ordinance since 2018, it is a mystery as to why these violations were not addressed in the DEIR. Also, per the section in the Municipal Code cited by Contract Planner, Eric Norris, in a letter to the applicant concerning other violations of the Municipal Code: "More on point is the requirement that a map must be denied if it does not comply with the General Plan and Zoning Code. Muni Code (section 16.16.080.D) states, A tentative map shall be denied if any of the following findings are made: 1. That the proposed map is not consistent with the general plan, applicable specific plans, or other applicable provisions of this code. Simply put, the map as presented to the Planning Commission for approval must meet all of the applicable standards of the Zoning Code. No mechanism is available to avoid this requirement."

2) The DEIR Analysis is based upon an Affordable Housing Proposal that does NOT conform to the City's Municipal Code and fails to account for potential California State Density Bonus and Development Concessions.

Because the applicant has featured "Affordable Housing" as a center piece of this project from day one, it is virtually impossible to prepare an EIR to CEQA standards without having a lawful Affordable Housing Agreement (AHA) in place that details the number, types and distribution of restricted units. As it stands now, the applicant is proposing that: NONE of the 51 Market Rate 4 Bedroom Single Family Homes will be restricted; ALL of the 25 Duets of the restricted housing will be on one lot, and the 11 ADUs will be on 11 of the Market Rate lots (location to be determined). If the City were to accept this legally dubious proposal as is, the project would be eligible for a State Mandated Density Bonus that could trigger development concessions as well as allow for between 30 or 40 more units. So, a legally comprehensive EIR would have to take into account the impacts of these concessions and potentially greater number of units. And, there is also some controversy about whether or not the ADUs that are located on Single Family Lots would qualify for a designation of restricted housing and qualify as units that could be applied to the Density Bonus calculation.

Also, since the latest Project Description has an Affordable Component that is violation of the Municipal Code, there may have to be further changes made to the number, types and distribution of the restricted units to bring the project into conformance. All of this speaks to the difficulty of preparing an EIR to CEQA standards where the legality, number, types and distribution of restricted units are a moving target. The City should insist that a legally conforming AHA be formalized and a new DEIR analysis be appended based upon the details of the AHA. To not do so will send this second attempt at an EIR to the same fate as the failed first seven-year effort. The applicant has had 11 years to provide a lawful AHA and the majority of the delay in this EIR can be laid at the feet of the applicant's inability or refusal to do so.

3) Environmental Diminishment of Taxpayer Funded Conservation Easements and a City Owned "Parklet" lot.

The DEIR makes no mention of how the extension of Adams and the intersection of Adams and Starr will be built upon a state taxpayer funded conservation easement. Additionally, there is a City owned parcel that will be paved over by the extension of Starr that is currently used as a non-motorized access point to the taxpayer funded river trail and levee hiking path. The conservation easements were agreed to by the City in exchange for funds from the Department of Water Resources to be used for the construction of the Flood Project in 2009. The City agreed that the conservation

easements were to exist in perpetuity. This would not be the case if a paved road(s), that would accommodate vehicles to access the residential housing proposed by the applicant, were built on the western portion of a conservation easement. This easement is clearly shown a map of the Levee Zone Easement (map attached) by recently prepared by the City to facilitate the transfer of deed to the Napa Valley Land Trust. Not only does this proposed road development on a conservation easement violate the spirit of the DWR agreement, it also threatens the funding from this organization if they find out that an easement has been violated. There is a precedent for having to return a public agency's funding for the flood project. When it was found out the City had used FEMA funding improperly and also double billed FEMA for flood project activities, the City had to return $1.9 million in funds.

Attached are comments prepared in 2019 by a resident of St. Helena, Victoria Bradshaw, for the 2040 General Plan Update. These comments detail how the City never included plans for an extension of Adams in any of the funding agreements that provided funds to build the flood control project. None of this was reported in the DEIR. Also, in these comments is a report on the shocking lack of maintenance by the City of the levee (that continues to this day!) that was never built to accommodate a road. Once again, … none of this was mentioned or explored in the DEIR.

Environmental impacts that come with the diminishment of conservation easements were never addressed by the DEIR. These include: having to walk/ride right next to a trafficked through road lined with parking and housing instead of what is currently open space/vineyard/wild life corridor. The path from the library to the river or atop the levee is an open space jewel that is enjoyed by many residents and visitors. The open space agricultural character of path(s) that are used to walk/exercise pets away from traffic, provided sweeping views of the surrounding mountains, and provide a much-appreciated tax payer funded venue for outdoor exercise and fresh air will literally be paved over. (Please see the attached photo documenting local Starr residents out walking their dog on Thanksgiving Day along the proposed route of the Starr extension.)

4) Traffic and Public Safety Impacts Not Mentioned in the DEIR.

Although the DEIR claims to have studied the Traffic impacts of the project using the newer VMT standard (that only studies miles traveled by the project's residents), there are quite a few Traffic Impacts that were ignored by the DEIR. Also, the DEIR failed to study the impacts on Public Safety by ignoring the potential problems with evacuation routes created by the project, be it for flood or fire.

Other traffic impacts not mentioned in the DEIR include:

a) An increase in pass through traffic through surrounding residential neighborhoods by drivers looking to avoid congestion on Main Street (Highway 29) by crossing between the Silverado Trail and Main Street. Taking highway traffic off the highways and routing it through residential neighborhoods is insane. However, this is what will happen with the advent of apps like Waze or Google Maps, that will direct drivers to go through residential neighborhoods to save just a few minutes of driving time if new connector streets (Adams and Starr) are built. Once again, …none of this was studied or identified in the DEIR.

b) Residents of Hunt's Grove and surrounding neighborhood will have to navigate and intersection with cross traffic (Hunt and Starr) to walk/drive to schools, shopping, etc. Simply put, there will be a lot more traffic on Starr if a connection is made to an Adams Street extension. Once again, …none of the impacts of this new intersection on the safety of residents was identified in the DEIR.

c) Overflow parking from Hunt's Grove is already a problem on Starr and the surrounding neighborhood. These problems will be exacerbated by the new development from all the higher density development allowed on Lot 52. In addition, whoever develops Lot 52 can request a parking concession from the Density Bonus program that will allow fewer off-road parking spaces to be provided. Once again, …none of the impacts on increased demand for limited parking spaces was identified in the DEIR.

d) Evacuation routes from Vineyard Valley and the surrounding neighborhood could be impacted by the additional pressures from the proposed development. Not only will residents in Vineyard Valley be evacuated, all the residents of the project will be using the same evacuation routes. This could turn the evacuation into a Public Safety failure. Once again, …this was not studied or identified in the DEIR.

5) Public Safety Hazards Concerning the Lack of and Maintenance of the Flood Project and the Construction of the Levee

The aforementioned Comments prepared by Victoria Bradshaw in 2019 for the 2040 GP document the lack of maintenance of the Flood Project since its construction in 2010 and also how the levee was never intended to be used as a road bed. These two conditions result in a heightened degree of the chances for catastrophic levee/flood wall failure that could result in a loss of lives and property for residential development in a flood plain behind a compromised levee/flood wall. This is the opposite of risk management and it was never mentioned in the DEIR.

Here is a link to a cloud photo album that documents the construction and (lack of) maintenance from the time the levee/flood wall was started in 2009 to just last Thanksgiving Day:

https://photos.app.goo.gl/dDLvFW3nwMzxc7HP8

As you can see, the rodent damage over the years is quite extensive. The rodent damage is most extensive at the base of the VV flood wall as well as where the wall meets the levee. This is the area that would be most impacted by hydraulic forces in a major flood event. Perhaps even more disturbing are the levee inspection reports obtained from the City dating from 12/6/2019 – 7/7/2021. They state for Item 10 Animal Control, there is an Acceptable Rating ("Continuous animal burrow control program in place that includes the elimination of active burrowing and the filling in of existing burrows.") Based on the photos, the rating should be Unacceptable ("Animal burrow control is not effective or is nonexistent. Significant maintenance is required to fill existing burrows, and **the levee will not provide reliable flood protection until this maintenance is complete**.")

Additionally, since the City could be liable for levee/flood wall failure, the impact to the finances of the City and its ability to provide services to the community could also be at risk.

City of St. Helena
Planning Department
1480 Main Street
St. Helena, CA 94574

February 27, 2020

VIA Email ben@vanzutphen.us

Mr. Ben vanZutphen
237 Lorraine Ct.
Healdsburg, CA 95448

Re: **NOTIFICATION OF FINAL UNRESOLVED ISSUES AND QUESTIONS** – Hunter Residential Subdivision Tentative Map Application Re-Submittal (File no. PL 10-040)

Mr. Hunter and Mr. vanZutphen:

The purpose of this letter is to summarize our current understanding of key aspects of the Hunter Subdivision and identify issues of concern to City Staff that have yet to be resolved.

Project Description:

The property contains 16.92 acres. The development proposed includes:

51 Market Rate For Sale detached single family residences with 11 Accessory Dwelling Units ("ADUs") deed restricted for rental at Moderate Income Rents; 20 Rental Duets at Moderate Income Rents; and 5 Rental Duets (Two duets + One single) at Very Low Income rents. The total number of units proposed is 87 (including the ADUs).

The Applicants are proposing to enter into an "Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants" (hereinafter "Affordable Housing Agreement) in conjunction with the approval of a Tentative Subdivision Map.

The City's issues of concern with the proposal are discussed below.

Affordable Housing Proposal:

The Affordable Housing Agreement that you have proposed to use will require significant additional editing to conform to this proposal. The Agreement is a form that would be used for a typical multi-family rental density bonus project. Your proposal, however, requests entitlements for a predominantly for-sale single family subdivision, with a clustered multi-family component and eleven ADUs intended to satisfy the City's

inclusionary requirements. The Agreement requires edits so that it is consistent with the proposal, and to correct a number of inconsistencies within the document. The City can make edits to the Agreement, but before doing so City staff would like to highlight a number of substantive concerns raised by the Agreement and the affordable housing proposal.

1. Compliance with the City's Inclusionary Housing Ordinance.

In a letter from RSA+ dated September 4, 2019, Mr. Sill asserts that the applicant does not intend to submit the project as an Alternative Equivalent Proposal under the City's Inclusionary Housing Ordinance, because the project is consistent with the requirements of Chapter 17.146. Staff disagrees with Mr. Sill's assertion for the reasons outlined below.

First, your proposal includes only rental affordable housing units. Under Section 17.146.050(g)(2), if "the developer is required to build four or more units of affordable housing, the number of affordable units which are required to be constructed in very low, low or moderate units shall be determined by the ration of units needed in each of those categories in order to satisfy the City's fair share housing goals."

The City's Regional Housing Needs Allocation currently requires the following number of units in each of the below market rate categories :

Very low income:	_____13 units	____25%
Low income:	___ _ 9 units	____17%
Moderate income	_____11 units	___ 21%

If you intend to provide rental units as part of this development, the units must be rented to very low, low and moderate income households based on the percentages set forth above. Your current proposal does not reflect those percentages, and therefore is not consistent with Section 17.146.050(G)(2).

Second, as we have discussed previously, City staff continues to have concerns with the fact that a portion of the affordable units will be provided as rental ADUs and the remainder of the affordable units clustered on a single parcel. Section 17.146.050(I) declares:

> Affordable units shall be comparable in number of bedrooms, exterior appearance and overall quality of construction to market rate units in the same residential project. Subject to the approval of the planning commission, square footage of affordable units and interior features in affordable units need not be the same as or equivalent to those in market rate units in the same residential project, so long as they are of good quality and are consistent with contemporary standards for new housing. Affordable units shall be dispersed throughout the residential project, or, subject to the approval of the planning commission, may be clustered within the residential project when this furthers affordable housing opportunities.

ADUs are significantly smaller units that are adjunct to the primary use of the single family dwellings located on each proposed lot. There is no indication that these ADUs or the duet units would have a comparable number of bedrooms to the market rate units, as required by Section 17.46.050(I).

Further, neither the ADUs nor the 25 duet units will be comparable in exterior appearance to the market rate units. This requirement is intended to ensure that the affordable units are indistinguishable from the market rate units, so that the affordable units are more fully integrated into the overall development. ADUs and duet units clustered onto a single lot unquestionably look different than single family homes, and therefore clearly have a different exterior appearance from single family homes. The proposal will not comply with this requirement of Section 17.46.050(I) either.

Additionally, while Section 17.146.050(I) indicates that the affordable units need not have the same square footage as the market rate units, that exception is "subject to the approval of the Planning Commission." (Id.) In this proposal, where the affordable units all appear to be significantly smaller than the market rate units, Staff would not recommend that the Planning Commission make such an exception.

Finally, the affordable units are not dispersed throughout the project. Over two-thirds of the units are located on a single parcel, and an additional eleven ADUs will be located on a handful of the other 51 lots. The proposal does not meet the spirit nor the letter of the requirement that the units be dispersed throughout the project.

In summary, City staff does not believe this proposal is compliant with the City's inclusionary housing requirements. As we have discussed previously, the Municipal Code does allow a developer to propose to meet the inclusionary requirements through an equivalent alternative action. We encourage you to provide a written narrative proposing how the affordable housing proposal will further affordable housing opportunities in the City to an equal or greater extent than compliance with the express requirements of Section 17.146.050(A), or the payment of an in-lieu fee. Based on the information that you have provided to this point, Staff cannot support your current proposal as compliant with the City's inclusionary housing requirements.

2. References to Low Income Units and Households.

Throughout the Agreement, there are references indicating that the proposed development includes units that are restricted for rental to Low Income Households. (See, e.g., Recital C, Article 1, Definitions, Section 2.3, Increased Income of Tenants.) However, the proposed development includes only moderate and very low income restricted units. If there are no low income units to be included in the development, the references to low income households and low income units should be deleted. However, as noted below, the City believes that you must also set aside low income units in order to comply with the City's inclusionary housing requirements.

3. References to Density Bonus..

Recital D of the Agreement stipulates: "As consideration for providing the Restricted Units, the Applicant reserves all rights under the State Density Bonus Law, as that term is defined in Article 1 below, with respect to incentives, concessions, waivers, and reductions." Section 2.2 of the Agreement also states that you are providing the affordable units in exchange for incentives, concessions, waivers and reductions. Staff continues to question this proposal. There is no request for a Density Bonus on file. In fact, the overall project density is 5.1 units per acre, exactly at the minimum range established for the Medium Density Residential Designation in the City's General Plan. Not only are you not providing any additional units beyond the minimum allowed by the General Plan, you have not specified the nature and extent of any "… incentives, concessions, waivers, and reductions" in the Agreement. Further, this Agreement is to be entered into and recorded after entitlements are approved for the development. At that point, the City cannot provide incentives, concessions, waivers or reductions. If you are seeking a density bonus, incentives, concessions, waivers or reductions under the Density Bonus Law, please indicate what those are so the City can evaluate them as part of our review of your proposal.

4. Additional Comments Regarding the Affordable Housing Agreement:

If this affordable housing proposal is to move forward, there are a number of issues that will need to be addressed in the Affordable Housing Agreement, including the following:

a. The Agreement would have to require that the 25 duet units will be managed by a property management firm experienced in managing income restricted rental properties, as approved by the City. This is especially important in this instance, where the developer is proposing to sell the market rate units but rent the affordable units. The City would need assurance that the rental units would be competently operated, in order to ensure that the rental units remain part of the City's affordable housing stock.

b. The Agreement would have to provide a mechanism to ensure, to the satisfaction of the City, that the ADUs would in fact be rented to households in the appropriate income categories. Individual homeowners frequently use ADUs as guest houses, offices, studios, and additional living space for the occupants of the primary residence. There would have to be some mechanism in place that would assure that did not occur with the restricted ADUs. Section 17.146.050(J)(4) requires that the resale restrictions for rental units must be acceptable to the housing director and city attorney, and this issue would need to be addressed in order to satisfy the City representatives.

c. In Section 2.2(b), the graphic indicates a mix of 23 two bedroom units and 13 three bedroom units. If there are no studio or one-bedroom units, those references should be deleted from the graphic. Additionally, Exhibit B indicates all of the duet units

are two bedroom units. That would mean there are at least 25 two bedroom units. That also suggests that all the ADUs are three bedroom units, which seems unlikely.

d. One of the duet units should be described as a single unit, since there are 25 units on the clustered lot, and there cannot be an odd number of duet units.

e. If there is to be a Homeowner's Association or equivalent entity, the dues or costs associated with that entity should be addressed in the Affordable Housing Agreement and included in the rent calculation.

f. The Agreement should expressly require, per the City's ordinance, that no certificate of occupancy shall be issued, final inspection approved or release of utilities authorized for any new dwelling unit in the project until the developer has completed on-site construction of all the required affordable units. (See Section 17.146.050(M).)

If this affordable housing proposal moves forward, the City will provide additional edits to the proposed Affordable Housing Agreement, and the City reserves the right to recommend additional changes to the Agreement as it proceeds through the Planning Commission and City Council process.

Conformance with the St. Helena General Plan and Zoning Code:

Conditional Use Permit Required

With 16.92 acres and a total of 87 units, the overall project density is 5.14 units per acre. The site is located within the Medium Density Residential (MDR) General Plan designation with a density range of 5.1 to 16 units per acre. The site is in the MR Zoning District that permits single family residences and Accessory Dwelling Units. Residential condominium projects, attached duplex or triplex units are permitted in the MDR District subject to the Approval of a Conditional Use Permit in each case. Based on your current subdivision plan, you should concurrently submit a Conditional Use Permit application.

Grading Plan

In reviewing the grading plan dated January 31, 2019, it estimates there will be 10,202 cubic yards of cut and 24,350 cubic yards of fill. There is information in the files indicating that all earthwork on the site will be balanced and no material will be imported. Given the amount of anticipated over-excavation and re-compaction necessary to prepare the site for development, please confirm that there will be no importing or exporting of soil as a part of the grading and site preparation work.

Also, in order to address concerns raised by adjoining property owners, please provide a written description of any retaining walls proposed around the perimeter of the development site, including specific heights and locations and the site elevation differential between existing adjacent residential lots and the proposed lots in your project. It is also important for the neighbors to understand how the fencing between

their properties and yours will be addressed. Will you be providing new fencing on your property line, resulting in two fences? If so, will there be a space between the fences?

Please provide the slope of the driveway into the multi-family parcel. There is an elevation provided for the extension of Adams but no grades for the multi-family parcel are provided or for the access drive.

Please address all of the above noted issues as soon as possible. We would appreciate responses no later than within 60 days of the date of this letter. Upon submittal of the requested information, please provide a letter indicating how each of the above noted items have been addressed and cite sheet numbers and/or supporting documentation as appropriate.

Completion of the CEQA Document:

Staff will be coordinating with Dudek to complete the E.I.R. as expeditiously as possible. Staff will keep you informed of the progress as it moves forward.

Should you have any questions or need additional information, please contact me via e-mail at mderosa@cityofsthelena.org

Respectfully submitted,

Maya DeRosa, AICP
Planning and Building Director

cc: Mark Prestwich, City Manager
Aaron Hecock, AICP, Senior Planner
Chris Gustin, Contract Case Planner

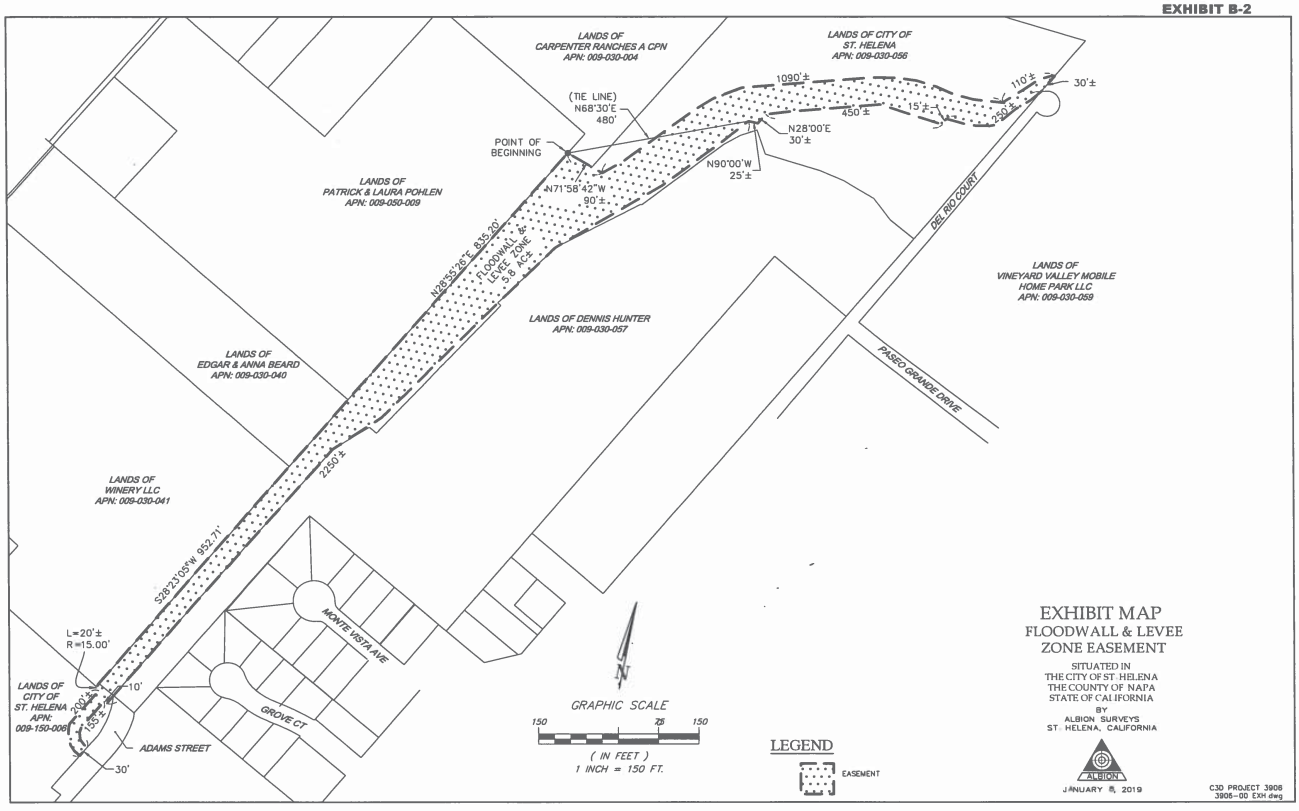


EXHIBIT B-2
LANDS OF CARPENTER RANCHES A CPN APN: 009-030-004
LANDS OF CITY OF ST. HELENA APN: 009-030-056
(TIE LINE) N68°30'E 480'
POINT OF BEGINNING
N71°58'42"W 90'±
N28°00'E 30'±
N90°00'W 25'±
1090'±
450'±
15'±
110'±
250'±
30'±
LANDS OF PATRICK & LAURA POHLEN APN: 009-050-009
N28°35'26"E 835.20'
FLOODWALL & LEVEE ZONE 5.6 AC±
DEL RIO COURT
LANDS OF VINEYARD VALLEY MOBILE HOME PARK LLC APN: 009-030-059
LANDS OF DENNIS HUNTER APN: 009-030-057
LANDS OF EDGAR & ANNA BEARD APN: 009-030-040
PASEO GRANDE DRIVE
2250'±
LANDS OF WINERY LLC APN: 009-030-041
S28°31'05"W 852.71'
L=20'±
R=15.00'
LANDS OF CITY OF ST. HELENA APN: 009-150-006
200'±
155'±
10'
MONTE VISTA AVE
GROVE CT
ADAMS STREET
30'
N
GRAPHIC SCALE
150 75 150
(IN FEET)
1 INCH = 150 FT.
LEGEND
EASEMENT
EXHIBIT MAP
FLOODWALL & LEVEE
ZONE EASEMENT
SITUATED IN
THE CITY OF ST. HELENA
THE COUNTY OF NAPA
STATE OF CALIFORNIA
BY
ALBION SURVEYS
ST. HELENA, CALIFORNIA
ALBION
JANUARY 8, 2019
C3D PROJECT 3908
3908-00 EXH.dwg

Potential Issues Related to the Adams Street Extension to the Silverado Trail

The Adams Street extension to the Silverado Trail could potentially create problems for the City's largest-ever public project, namely the St Helena Comprehensive Flood Control Project. While that street extension appears in the 1993 General Plan and the 2040 General Plan Update, it did not appear as part of any of the county, state or federal funding agreements, which were the funding sources for nearly all of the money used to build the flood control project. Nor did the street extension appear as part of permit applications or approvals required to build the levee or flood wall. While the original design of the Flood Control Project, which was done right after Measure A passed, showed a discretionary extension of the Adams Street to the Silverado Trail, it was not part of the project by the time the EIR was finalized, the RFP was let for the flood control project and all permitting, funding and approvals were done after 2006. There is, unfortunately, a common misconception in St Helena that the extension of Adams Street to the Silverado Trail was somehow approved as part of the Flood Control Project and because it appears in the 2040 GPU. There are, however, a number of other important issues related to this particular project.

1. There were at least six different funding sources for the Flood Control Project, almost all of which had specific requirements in order to obtain funding and some of those requirements extend into perpetuity. Two of the funding sources were federal, two were from the state, one was from the county and the last was from the City's own general fund. With the exception of the funds from the City's general fund, none of the five other funding sources considered the extension of the Adams Street to the Silverado Trail and its impact on the Flood Control Project in their approval of their funds for the levee and floodwall project.

   For example, the "Maintenance and Property Improved" section of one of the state funding sources states:

   "Grantee agrees to use, manage and maintain the property developed, rehabilitated or restored with the grant funds provided in this Agreement consistent with the purposes of the program and is required to continue into perpetuity or until deemed no longer necessary by the State."

At the very least it appears the City would need to get the state's approval to build the extension of Adams Street, since the road extension was not considered when the project was approved and funded and, therefore, would not be considered "consistent with the purpose of the program," which was entirely a flood control project and not in any way a road project.

In seeking the State's approval, however, the issue of whether or not the levee and flood wall have been maintained according to the Army Corp of Engineers standards (which is required by the Flood Control Project's operational and maintenance manual) will likely be examined. From documentation about the maintenance of the levee for the first five years from its completion through 2015, it is absolutely clear it had not been maintained according to the Army Corp of Engineer standards and, in fact, has had barely any maintenance. The documentation of the maintenance of the Flood Control Project from 2016 to the present has not been available, but it is clear from the hundreds of gopher holes appearing every year in both the levee and foundation of the flood wall, no other conclusion could be reached other than the maintenance of our largest project has not been robust, let alone up to acceptable standards. Residents have been taking pictures of the gopher holes appearing each year in the levee and flood wall, just in case it ever becomes an issue. According to Dr. Nicholas Pinter, a national levee expert currently at UCD, who has spent time examining the St Helena levee and the issues related to it, has said that burrowing animals on any levee is one of the signs that a levee is not being maintained appropriately. Keeping burrowing animals away from the levee is one of the first issues raised in the Flood Control Project's own operation and maintenance manual.

2. There were also at least eight state and federal permits or approvals required in order to build the levee, flood wall, terraces, etc. Many of these permits involved specific requirements and were issued without any consideration of the extension of Adams Street. While the 1993 General Plan Circulation Element showed Adams Street as a potential street extension to the Silverado Trail, it was not a factor considered in any decision to either issue required permits or in providing funding for the Flood Control Project. To now attempt to extend Adams Street to the Trail may jeopardize some of those permits and approvals. Examples of some of the unique permits and approvals required include:

    California Endangered Species Act Incidental Take Permit;

California Fish and Game Streambed Alteration Agreement;
US Army Corp of Engineers 404 Permit;
State Water Resources Control Board Section 401Water Quality Certification;
State Historic Preservation Office;
Bay Area Regional Water Quality Control Board National Pollution Discharge Elimination System permit; and
US Fish and Wildlife Service and Atmospheric Administration Fisheries Section 7 approval.

As an example, according to the staff report to the City Council dated May 24, 2016, the California Endangered Species Act Incidental Take Permit (ITP) No. 2081-2009-004-03 through the California Department of Fish and Wildlife (DFW) required, as a mitigation measure, that a deed restriction into perpetuity be placed over a portion of the city-owned land consisting of two parcels totaling approximately 10 acres. In addition to this requirement, the funding from the Department of Water Resources (DWR) required the creation of a conservation easement deeded into perpetuity over the same area of city-owned land. This staff report goes onto explain that in 2016 the City worked with the state to develop a specific deed restriction acceptable to the state, which was discussed at that City Council meeting. The state approved the Land Trust of Napa County (Land Trust) as the third-party easement holder. To avoid a duplication of efforts, both DWR and DFW mutually agreed upon a single conservation easement and the Land Trust as the conservation easement holder.

According to the staff report, during an on-site meeting with the Land Trust staff in 2016, the subject of the extension of Adams Street extension was discussed. The conservation easement would only permit the maintenance of existing infrastructure, flood control measures and habitat. It would prohibit the construction of a street, pedestrian path or bicycle lane on that portion of the City-owned property. The staff report concluded that Adams Street could not be extended to the Silverado Trail.

To ensure that there were no other alternatives available at that time (in 2016), City staff reached out to both DWR and DFW about the conflict between the 1993 General Plan (and the proposed GPU) regarding the extension of Adams St. DWR told the City staff that it would not approve a change to the conservation easement area or possible alternative mitigation to satisfy the requirements for the grant funds. This grant was scored and

awarded partially as a reflection of the proposed mitigation measures. If the conservation easement approved by the state in 2016 was not approved, then it is possible that the basis for the grant application approval would no longer be supported and all funds would have to be returned. In order to close out that grant it would be necessary to approve the road-restricted conservation easement and record it.

The staff report goes on to explain that if the City decided to return the grant money to the DWR, it would still be necessary to work with DFW before any consideration could be given to extending Adams Street. An alignment study would be necessary to satisfy the original Endangers Species Incidental Take Permit to look at what portion would be taken out of the conservation easement to make room for the street extension. After this is done the City would have to submit a request describing the proposed area to be removed from the deed restriction for the road. DFW would then review the proposal and, either recommend alternative-mitigation measures to satisfy the original permit or to deny it. The staff report concluded that if alternative mitigation measures were approved, they would be significantly more expensive and any alternative mitigation within the existing permit area would likely cause higher mitigation requirements on other projects when future permits are issued. If DFW denies the request, then there could be some significant financial consequences ($173,000) and the complete conservation easement would be required.

At the City Council meeting in May 2016 there was much discussion of the effect of the conservation easement discussed with DWR, DFW and the Land Trust on the extension of Adams Street to the Silverado Trail. The conclusion at the City Council meeting was clear, namely the approval of the conservation easement that the state was seeking would foreclose the extension of Adams Street to the Trail. The City Council approved the proposal.

Three months after the City Council approved the conservation easement that would foreclose the extension of Adams Street to the Silverado Trail, the Land Trust Board of Trustees approved the project on July 28, 2016 at their Board meeting.

Nearly two years after the City Council approved the conservation easement that would not allow the extension of Adams Street to the Silverado Trail, the issue again was raised at the March 13, 2018 City Council meeting. At

that meeting the Council approved a contract with 'the Land Trust of Napa County for a conservation easement as required by the terms of the Department of Water Resources grant contract No. 4600009016 for an amount not to exceed $65,000." The staff report explains that staff would work with both the Land Trust and DWR on the deed restriction. Nowhere in the staff report does it mention any of the following: (1) the prior City Council's approval on May 24, 2016 of a conservation easement, which would effectively restrict a roadway through the 10-acre site; (2) the prior conversations in 2016 on the conservation easement with both the Land Trust, DWR and DFW; and (3) the conservation easement into perpetuity requirement resulting from the granting of the Endangered Species Act Incidental Take Permit.

On October 23, 2018 (or two and a half years after the City Council approved the conservation easement, which effectively restricted the extension of Adams Street to the Trail), the City Council approved a second conservation easement giving the City the ability to approve a roadway through the 10-acre site required for a conservation easement. Once again, the staff report does not mention the May 24, 2016 City Council approval of a conservation easement effectively foreclosing the extension of Adams Street to the Trail, nor does it mention the Department of Fish and Wildlife's requirement for the very same restricted conservation easement because of the ITP granted to the City when it built the Flood Control Project. Also, of some importance, is the statement in the staff report that the City had been working with the Land Trust since March 2018, when, in fact, the staff had worked with the Trust well before May 2016. By not including the information about the prior City Council approval of the road-restricted conservation easement and the information about City's prior conversations with DWR, DFW and the Land Trust, it might call into question the appropriateness of the October 23, 2018 conservation easement approved by the Council. Both the City Council and the public were not furnished accurate or complete information before the Council took action.

It is unknown if the City has recorded any easement as required by the ITP and DWR grant. Also unknown is, whether or not, the second conservation easement approved by the City Council was prefaced by any conversation with any state agency confirming the change in the previously approved deed restriction concept. It is also unknown how the City closed out the DWR grant without proof of the conservation easement being passed and recorded, which was the key item preventing the grant close out. The

conservation easement was also the final item preventing the City from getting the final $237,000 for eligible project costs. If the grant has not been closed out, both DWR and DFW would have the ability to further audit the project, including the appropriate maintenance of the project and all required mitigation measures. A logical assumption is that the DWR grant has not been paid off because there has been no appropriation by the City Council for that amount of money.

If the City attempts to extend Adams Street to the Trail, it will again be necessary to get an Endangered Species Act Incidental Take Permit from DFW for that project. Unfortunately, this will put the City in the position of asking for approval of a new permit just after the City finished ignoring the mitigation measures agreed to by the City's in its prior ITP for the Flood Project. The likelihood of getting a second ITP would not be strong after ignoring the mitigation measures required in the first ITP.

It is also unclear what position DWR would take, if the City elects to extend Adams Street. Apparently, they were adamant they would not approve it the first time the City asked DWR about it in 2016. It has been nearly a decade since the flood control project was funded and completed and it is now approaching four years since the prior City staff conversations with both DWR and DFW on the issue of the conservation easement and the ability of the City to build a road through it. It probably would be prudent to acknowledge those prior conversation to both DWR and DFW in any of the City's current round of discussions. If the City doesn't do that and the state later finds out about those conversations, then the City may well jeopardize future grants or permits from these same agencies.

There is also another significant potential conservation easement issue. The DWR grant requires a conservation easement into perpetuity basically on any city-owned property on which DWR funds were used for the Flood Control Project. The only area the City originally determined to be included in any easement is 10-acre site of the city-owned land nearest the river. The expense payment reimbursement requests by the City to the DWR under the grant during the construction of the Flood Control Project, however, also appear to include costs used on the project's access road and pedestrian path. This area is also city-owned land and is not included in the 10-acre conservation easement. This is the city-owned property furthest from the river and which connects the access road and pedestrian path adjacent to the current terminus of Adams St to the original 10-acre conservation easement

site closest to the river. If that is correct, then the part of the project closest to the current Adams Street terminus would also have to be placed into the conservation easement into perpetuity in order to satisfy the grant agreement. Even a cursory look at some obvious items appearing on and/or making up the pedestrian path and the access road were itemized by the City as having been reimbursed under the DWR grant. This issue has been previously raised with the city a couple of times, but the staff has chosen to ignore it.

3. Shortly after Measure A was passed by the voters in 1998, St Helena began working on a Comprehensive Flood Control Project. In the original design was a levee, which cut the historic flood plain in half. The reason for the location of the levee became apparent, when the City proposed to combine the placement of the levee (to be paid for with Measure A funds) with an all-weather extension of Adams Street to the Silverado Trail, which was called the Adams Street Causeway and Bridge. Glossy brochures were produced by the City and distributed to residents in order to gather public support for the project that specific alignment of the levee to help provide a roadway.

   The 2004 EIR showed the Adams Street extension as a discretionary addition to the Flood Control Project (requiring a separate environmental review) using the levee as the primary vehicle to extend Adams Street to the Trail. On June 23, 2005 the Napa County Flood Protection and Conservation District notified St Helena that the Napa County Flood Protection and Watershed Improvement Authority had made inquiries regarding the levee because <u>any portion of the levee used for a component of a future transportation facility would thereby be ineligible to be constructed using Measure A funds</u>.

   As a result, Jonathon Goldman, the Director of Public Works and City Engineer for St Helena, wrote a letter to Robert J. Peterson, Napa County Flood Control and Water Conservation District Engineer, answering the question as to whether the levee is, in fact, intended to support a road rather than simply to provide flood protection. Goldman's July 12, 2005 letter says the "levee element serves two functions in the Project, (1) provide a barrier against inundation, and (2) provide an onsite location for disposition of soils to be removed from the planned terraces. The planned levee is wider than what would be necessary if only inundation-prevention were the objective. The levee is wider in order to accommodate the disposition of soils to be removed from the terraces. If the soils to be excavated were to be trucked to

offsite disposition, traffic and other potential impacts, as well as the cost of the Project, would increase."

The rest of Goldman's letter to Peterson goes on at great length to try to convince him that the real reason for the wider levee is the volume of soils to be replaced and not the placement of a road on the levee. Assuming that Goldman's information is correct, then there is no assurance that the levee can now sufficiently serve as the foundation for an all-weather road to the Trail, since the only requirement for the wider levee was not to support a transportation facility, but simply to provide a dumpsite for extra soil. Goldman makes clear the levee is wider than necessary to provide inundation-prevention only because it was needed as a dumpsite. The implication here is that the dumpsite was not engineered to support a roadway, because that would have foreclosed Measure A funding. To now claim that additional costs were, in fact, incurred to widen the levee to provide an appropriately engineered infrastructure for a roadway, could put our Measure A funding in jeopardy.

In the 2005 and 2006 Addendums to the 2004-approved EIR, any mention of the Adam Street extension was limited to the fact that it said there was no change from the 2004 EIR because the City was not considering approval of the Adams Street Causeway/Bridge and this issue required no further consideration or analysis.

After the 2005 and 2006 Addendums to the prior-approved 2004 Flood Control Project FEIR, no Flood Control funding applications, permits, etc. likely could go forward with an Adams Street extension to the Silverado Trail as part of it because there was no EIR done on that specific project.

4. Whether the extension of Adams Street is on, adjacent to or near the levee, the levee itself would not be benefited and likely the viability of the levee and Flood Control Project would be negatively impacted. The levee itself has not been maintained appropriately and the City has already told the County that the levee was not constructed in a manor to build a future road, but rather just a "dumping" point for excess soil removed from the project terraces. The levee operational and maintenance manual already requires that a gate be placed on the access to the levee to limit the use of cars on the levee. This only supports the concept that building a public road on the levee was not anticipated in the construction of the levee.

If the roadway is built alongside the levee, then any actual construction of the extended roadway and the bridge to the Trail and any ongoing use of the roadway would not be helpful in maintaining the viability of the levee. The safety and financial risks from a levee failure far outweigh any benefit from an extension of Adams Street to the Trail. Vineyard Valley and Hunts Grove residents are the most vulnerable of our population if the levee fails or its viability is threatened. If the levee fails, particularly because the City failed to maintain it adequately or because the City threatened the viability of it because of building a roadway on top of or adjacent to the levee, then the City would likely bare the financial liability for any damages resulting from the failure. The City assumed that liability once it accepted money from the State as explained in AB 1898 and CA Water Code §12748.3, which basically indemnified the state.

5. The St Helena Comprehensive Flood Control Project was a financial disaster for the City. Not only was the project way over the projected costs, but FEMA clawed-back $1.9M for disallowed expenses (such as the cost of crushing Merlot grapes in Mendocino County). DWR also required the repayment of $2.1M for disallowed expenses and double billing the same expenses to two different state funding sources. It is unclear if that repayment has been completed. As a result of the completely inadequate handling of the financial activities involved in the project, the City hired a forensic accountant. After months of review, the forensic accountant basically gave up. If the City decides to extend Adams St to the Silverado Trail, issues related to the repayment of grants, etc. will once again raise issues concerning the mishandling of the financial accounting of the monies spent on the project. The fact the City has not been able to close out a state grant on a project that was completed in 2010 will not help the City's case.

6. If the City elects to extend Adams Street to the Silverado Trail they will likely need the approval of both DWR and DFW for the reasons explained above. In addition, the City may also need the approval of the Napa County Flood Protection and Watershed Improvement Authority (Measure A authority) since the City previously said the design of the levee was not to facilitate a future transportation facility. Other approvals would possibly need to come from the Army Corp of Engineers, who approved its permit without information pertaining to a potential future roadway on or near the levee. The Army Corp of Engineers would also likely review the maintenance of the levee if their approval is necessary. FEMA, who approved funding for two grants based on flood control needs and then

approved the revised the flood zone after the project was built without any information pertinent to a roadway on or near the levee and its potential impact on the viability of the levee would also likely seek review.

Less problematic options for any additional access to the Silverado Trail from Highway 29 would be Mills Avenue to the south or Fulton Avenue just to the north of Adams Street. Neither of these options would run into any of the financial, administrative or safety problems that as Adams Street extension poses for the City.

Xinia Gamero

From: jmzin@comcast.net
Sent: Tuesday, November 1, 2022 12:16 PM
To: Public Comment
Cc: jmzin@comcast.net
Subject: [External] Resubmission of 11/2/2021 Public Comment on Hunter Project DEIR for Agenda Item 5.1 to Preserve Legal Rights to Raise Issues in Court

John Milliken (jmzin@comcast.net)

Mobile/Text: 7074864266

1256 Hudson Ave., St. Helena, CA 94574

From: John Milliken <jmzin@comcast.net>
Sent: Tuesday, November 2, 2021 2:56 PM
To: publiccomment@cityofsthelena.org
Subject: PC Meeting 11/2/2021 Public Comment on Hunter Project DEIR from John Milliken

First of all, I would like to provide a link to an article written by Professor Nicholas Printer of the UC Davis Center for Watershed Science that I think should be mandatory reading for each Planning Commissioner and the City Staff involved in preparing the DEIR.

https://californiawaterblog.com/2016/07/17/st-helena-california-dealing-with-a-field-of-dreams-levee-residual-risk-and-a-flood-of-controversy/

None of the issues covered in this article were mentioned in this DEIR.

Second, I would like to express my dismay at what an unprofessional, non-comprehensive, and shallow effort this latest DEIR effort represents. It is absolutely mind boggling that this DEIR could only identify two significant impacts (both traffic related) for a major development project of this size after an almost four-year effort at a cost of over $450,000. The DEIR reads like an infomercial the applicant. I intend to submit separate comments on the many deficiencies and missed impacts either completely ignored or glossed over by this so-called DEIR. I do not know who was in charge of this effort, but I think the City Council and Planning Commission should seriously consider an inquiry into how this happened and there should be consequences for those responsible. This community (whose environment is being impacted!) deserves much better than this and this DEIR effort crosses the line of professional negligence. I am not asking for a DEIR that supports the grievances of the many members of the community who are opposed to this mammoth 87-unit development, rather, I was expecting a balanced DEIR that fairly identified ALL the environmental impacts presented by this development and was prepared to lawful CEQA standards. This DEIR does neither of those things. How can a DEIR propose meaningful mitigations if it cannot properly identify environmental impacts?

I do not know if this substandard DEIR effort was by intent or the result of a lack of oversight by the Lead Agency, the City of St. Helena, but the end product is seriously flawed. As you can probably see by all the public comments submitted to date and an avalanche of comments to be submitted by the November 8th deadline, I am not the only one to have noticed this. Thankfully, many members of our community have taken on the responsibility of correcting this wrong and will be submitting comments that identify way more impacts than were identified in this DEIR. And, they are not being paid $450,00 to do this and were only given 45 days to prepare comments instead of four years.

Oh,..one more thing. When several members of the community (whose environment is being impacted!) politely asked if the comment period could be extended so that they could have more time to prepare researched, cogent comments on the lengthy 28 Mb download and 633 page DEIR document, they were quickly rebuffed and simply told no. This seems a little harsh considering that this second DEIR effort is heading into its fifth year after a failed first seven-year effort. FYI: The comment period for the first failed EIR effort in 2012 was extended to 90 days. I guess this contempt for the community (whose environment is being impacted!) is the new norm and this is what we will be dealing with for the remainder of the process. It is my hope that Planning Commissioners will ask staff some questions about this DEIR process when they are afforded the opportunity after the Public Hearing closes. The ability to ask questions was not afforded community members.

John Milliken

jmzin@comcast.net

707-963-8134 (Office) 707-486-4266 (Mobile\Text)

1256 Hudson Ave.

St. Helena, CA 94574

Xinia Gamero

From: Laurel Krsek <laurel.krsek@gmail.com>
Sent: Tuesday, November 1, 2022 12:40 PM
To: Public Comment
Subject: [External] Hunter Project Comment

To: City of St. Helena

This note is to express my strong objection to the proposed Hunter project development.

As a long-time resident of St. Helena, 22 years of which I have resided on the east side of town on Peppertree Circle, I have serious concerns about the construction of 87 additional homes in the Hunter location.

Regarding traffic circulation and emergency access, Pope Street is already severely impacted with traffic to and from Main Street and the Silverado Trail. As you know, the Pope Street bridge is inadequate to accommodate a large volume of traffic, and remains the single outlet through town to the Silverado Trail. The addition of more population in this isolated pocket of land without first addressing the traffic, community safety and emergency vehicle access is extremely poor, irresponsible planning.

Regarding the need for housing, I understand we need housing for families, but the isolated location of this development makes these homes the furthest in town from our public schools and transportation. This is an immediate hardship for families. We should instead build in locations that are not along the river and have walkable, safe access for children and families to our schools, businesses and public transportation.

Regarding adequate infrastructure, the city water supply and sewers are already stressed. These capacity issues should be addressed before allowing this development to proceed.

Laurel Krsek
St. Helena

Xinia Gamero

From: Cindy Tzafopoulos
Sent: Tuesday, November 1, 2022 1:02 PM
To: Xinia Gamero
Subject: FW: Hunter Project FEIR/Public Comment/Request for Extension

Public comment

Thank you,

Cindy Tzafopoulos
City Clerk
City of St. Helena
1572 Railroad Avenue
St. Helena, CA 94574

Direct 707-968-2742 | Cell 707-312-1257
Fax 707-963-7748
ctzafopoulos@cityofsthelena.org
www.cityofsthelena.org

Office Hours:
Monday – Friday
9:00 a.m. – 4:00 p.m.
Closed for Lunch between 12:00 – 1:00 p.m.

E-mail correspondence with the City of St. Helena (and attachments, if any) may be subject to the California Public Records Act, and as such may therefore be subject to public disclosure unless otherwise exempt under the Act.

From: Monique Olivier <monique@os-legal.com>
Sent: Tuesday, November 1, 2022 12:57 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>; cityclerk <cityclerk@cityofsthelena.org>
Subject: [External] Hunter Project FEIR/Public Comment/Request for Extension

Dear Planning Staff:

I am writing to request an extension to review and provide public comment to the FEIR and this proposed project. The FEIR document is over 2,000 pages in length. The mere days to review the FEIR, coupled with such a lengthy document, denies the community appropriate notice and opportunity to comment on such a major project that will absolutely impact the City of St. Helena and its residents. The community needs additional time to review and also to, for example, request public information that the FEIR refers to but does not provide. In addition, the fact that the name of the project has been changed and is no longer be referenced in public materials as the Hunter Project has deprived the community of appropriate notice. It is imperative that an extension be granted to permit adequate community review and response to this proposed project.

Thank you.
Monique Olivier
708 Hunt Avenue
St. Helena

Xinia Gamero

From: fj <frank.jonelis@gmail.com>
Sent: Tuesday, November 1, 2022 1:19 PM
To: Public Comment
Subject: [External] The Hunter Project

To the Saint Helena Planning Commission
11.1.2022
Re:The Hunter Project

The Hunter Project is like Rasputin. It refuses to die.

The City of Saint Helena never should have originally approved consideration of this project, but seems to have been scammed or otherwise influenced to start the process long ago.

The project is extremely dense, not in character with the surrounding area.

It will use a huge amount of water, no matter what the developers try to say.

Simply look at the thing. Will it really have as little impact as the developers claim? Do we have enough water for Saint Helena now, even without the water suck
the Hunter Project will cause? Of course not.

Will the Hunter Project pave over or otherwise cover ground that now absorbs water into the aquifer? Yes, it will.

Will it displace and affect wildlife? Of course.

Is the Hunter Project in a flood zone, even though taxpayers were scammed into providing it with its own, private levee? Yes, it is.

California and the Napa Valley alternate between drought and flood. It has always been that way, and it is getting worse, as we all can see. The droughts are getting worse, and the floods, when they come, which they will, will be worse.

The Hunter Project will add more cars and traffic noise to a formerly quiet part of town. No matter how the developers claim it won't,
anyone with a brain knows it will.

Traffic; noise; air pollution; increased waste and sewage; increased use of water; increased runoff; decreased charging of the aquifer;
sitting in a flood zone; ...

How many more excuses and meetings are there going to be to try to justify a monstrosity project that never should have been considered
in the first place?

It is time to end the Hunter Project once and for all. Show that you actually care more about the quality of life in Saint Helena than you care
about making the owners of the Hunter Project rich.

Thank you.

Frank Jonelis, Saint Helena

Xinia Gamero

From: Maya DeRosa
Sent: Tuesday, November 1, 2022 1:46 PM
To: Xinia Gamero
Cc: Eric Norris
Subject: FW: [External] public comment on Hunter EIR certification

Public comment for 11/1 agenda.

MAYA DEROSA, AICP
COMMUNITY DEVELOPMENT DIRECTOR
City of St. Helena | Community Development Department
1572 Railroad Avenue | St. Helena, CA 94574
Direct: (707) 967-2783 | mderosa@cityofsthelena.org | http://cityofsthelena.org/planning

From: Sherri Kelly <sherrikelly1192@gmail.com>
Sent: Tuesday, November 1, 2022 12:51 PM
To: Maya DeRosa <MDeRosa@cityofsthelena.org>
Subject: [External] public comment on Hunter EIR certification

As a matter of context, I want to begin with a reminder that page 13 of the October 2022 Public Review Draft, City of St. Helena Zoning Code Update states "The purpose of this Zoning Code is to: "Protect and promote the **public health, safety**, peace, comfort, and general welfare; Encourage **orderly, compatible** and beneficial uses of land; **Minimize conflicts which might result from incompatible and inappropriate land** uses…." The purpose of the CEOA EIR development process is to further those land use goals. However, based on examples such as the ones I bring below, it seems the core intent of the Hunter EIR development CEQA process is being improperly manipulated to further the financial goals of the Hunter Project developers, while completely discounting the safety of current and future residents in proximity to the Hunter Project, as proposed.

It should be also noted that Page 9 of the Planning Commision Report for November 1, 2022 on file number PL10-040 and TM 2022-001 regarding the Hunter Subdivision Map cites Government Code Section 65589.5 (j)(1) in providing that …the City may only deny the project if it finds, based on written findings supported by a preponderance of the evidence in the record that both of the following conditions exist:
1. **The housing development project would have a specific, adverse impact upon the public health or safety** unless the project is disapproved or approved upon the condition that the project be developed at a lower density. As used in this paragraph, a **"specific, adverse impact" means a significant, quantifiable, direct,**
safety standards, policies, or conditions as they existed on the date the application was deemed complete.

There are historic, significant, direct and quantifiable traffic and congestion issues in the neighborhoods proximate to the proposed Hunter Project. The Hunter EIR findings are inadequate

and unrealistically dismissive to negative impacts on public safety in St. Helena should the project be built as proposed. The dismissive response to the public safety needs of the community and the inadequacy of this EIR is substantiated by the fact that no revisions were made in EIR Section 3.1 Transportation and Circulation, in spite of numerous traffic and evacuation safety concerns posted by community members during the public comment period on the Hunter DEIR.

Section 3.14-5 of the EIR states “Under Cumulative conditions, would the proposed project conflict or be inconsistent with CEQA Guidelines section 15064.3(b)? This is considered a significant impact. No mitigation measures available.” My understanding is that CEQA section 15064.3(b) pertains to potential negative traffic impacts. **On page 3.15-5 the authors of the EIR thus acknowledge the project will exacerbate traffic problems in the immediate vicinity and there are no mitigating actions possible.**

The developers of the EIR document have completely dismissed the existing traffic issues in the developed areas adjacent to the proposed Hunter project -- Hunt Avenue/Hunt’s Grove/Meadowcreek Circle/Starr Avenue. Simply saying there is nothing that can be done to mitigate a problem doesn’t make it go away, or make it better. Observational evidence of conditions in the area around the proposed Hunter Project indicate that adding 80+ households to the area, without developing paths of emergency egress in addition to the roadways proposed by Hunter, will create immediate and negative impacts on public safety.

Section 3.14-4, page of the EIR states “Would the proposed project result in inadequate emergency access? This is a less than-significant impact.” The facts of current and past traffic problems and past traffic studies in the immediate area of the proposed Hunter Project do not support this finding. The one marginally successful August 2021 emergency evacuation drill in Vineyard Valley cited in Master Response 1 (Planning Commision Report page 1446) is not an accurate model of an emergency evacuation of the entire St. Helena area east of Main Street. This is another example of flawed and dismissive analysis in the Hunter EIR development process.

According to the EIR section 2-23, “Development of the Project site would require the extension of Adams Street and Starr Avenue onto the Project site to provide two points of ingress and egress….” In addition to aggravating the impacted neighborhood traffic situation, further increasing the density of the adjacent neighborhood housing will directly endanger current residents, well as any future residents of the proposed Hunter project, if a sudden emergency evacuation is necessary, given the few points of exit (Pope Street bridge, Main Street) from the area. Responsible addition of 80+ households to this area must require development of ***several*** additional entry and exit points; the two cited in the EIR are not sufficient to safely evacuate the planned Hunter development. In addition, due to prior land use agreements made by the City of St. Helena, it is highly questionable whether there will ever be a bridge built crossing the river at the intersection of Adams Street and Silverado Trail.

The EIR cites the historic frequency of local natural disasters in the form of floods “...1973, 1978, 1982, 1983, 1986, 1995, 1997, 1998 and 2005 (page 3.9-5)” and wildfires “August 2020 there were a number of wildfires including the LNU Lightning Complex Fire and the Glass Fire that burned large areas of Napa County including a small portion of the Project site (page ES-4).” The fragile and limited points of egress on the east side of St. Helena have had a history of creating crisis situations as a result of our frequent natural disasters, such as the recent landslide blockage of Silverado Trail in October 2021. The findings of the Hunter EIR indicate a dismissive and inadequate assessment of existing emergency evaluation problems in the area surrounding the proposed development. Another example of the inadequacy of the EIR is that the recommendations of the California State Department

of Transportation on the development of safe evacuation routes (Evacuation Route Guidance, Design Information Bulletin 93, dated 12/23/20) are not being followed in the plans for the Hunter Project.

Sherri Kelly

1192 Meadowcreek Circle

From: Lou Lavigne & Nancy Rothman
Fulton Lane, St. Helena
Subject:Hunter Project EIR

Dear Planning Commission:

Reviewing this giant proposal with little time for citizens to study should be immediately delayed to allow an appropriate longer review period.

That said in the meantime the consultant and the applicant should address the issues raised previously about this proposal..they have not gone away and on rapid review are not solved in the latest proposal.

-Flood risk-it is difficult to see how building inside the levee on the floor of the basin is a safe proposition…who is going to assume the liability..the City or FEMA? Then there is the question of flood risk to the surrounding area starting in particular with Vineyard Valley ….?
We are also concerned that if the levee is compromised the two major drainage ditches from Fulton Lane will be overwhelmed and flood water will back up toward Fulton Lane as well. This already occurs in heavy rains to some extent near the outside base of the levee due to the congested connection of the Fulton drainage ditches and poor maintenance of the ditches which apparently is a City responsibility.

-Water Supply & Sewage -how any proposal to add 20 acre feet of water use (or 6.5 million gallons…more graphic) to St. Helena's already constrained water supply could be justified based on the ludicrous idea of retrofitting 333 offsite homes or paying ~$597,000 in lieu fees just doesn't compute without an identified plan.. Where is the water going to come from? St. Helena already has constraints on obtaining more water supply? Then there is the proposed use of abandoned wells being activated for the landscaping..where are these wells and is that practical without jeopardizing the other wells of vineyards and residents in this area.
Then there is the other side of the new water usage….Sewage..how the City's sewage system and plant could be made to handle even an additional 6.5 million gallons of waste water is a major challenge considering current City finances and sewage needs.

-Traffic-St Helena recently had a good taste of incremental traffic on Pope Street and surrounding streets with the rain caused closure of Silverado Trail; not a pleasant experience.
The proposed project adds traffic issues on at least two fronts:
If as the developer proposes Starr Ave. were extended to an extended Adams Street the resultant short-cut speedway from Pope Street to Main street via Starr and Adams will further the traffic jam at Railroad and ultimately Main Street. Any proposal to add stop lights on this route would risk increasing speeds in a residential area with drivers attempting to make the light/s. Then there is the added traffic resulting from the residents and their visitors and vendors of the proposed development which will also feed into the extensions of Adams and Starr….plus the incremental intersections added by the proposed project would further add traffic hazards and congestion potential. The intersections of Pope and Starr, the extended Starr and Hunt, Starr and the new street in the proposed development and the intersection of the extended Adams and Starr plus a new proposed street in the development linking with Adams at that same proposed intersection are all going to add congestion and pollution in a residential and agricultural neighborhood.

-Parking-while the project allows for parking it is hard to see based on other areas of the City where development has occurred that the proposed project doesn't add additional cars parking on-street further adding to congestion and adding more hazards for traffic, pedestrians and bicyclists.

-Hiking Trail—everyday we see many people hiking on the City Trail alongside and the one on top of the levee literally all the way to the Napa River…a beautiful walk in surrounded by vineyards and much nature as it is also a natural habitat in places. To systematically destroy the rural charm of St. Helena including jeopardizing this hiking trail plus replacing vineyards with houses and streets is short sighted in our view.

-Affordable Housing-we recognize and support the need for additional affordable housing, however, to build it in a flood risk area and to add a major residential development with all the issues raised here and by others seems like an inefficient way to get there. The City should fully explore other more development efficient alternatives.

-Financial strength of the developer—while this isn't a topic for the EIR per se it becomes one that needs to be carefully evaluated and monitored due the disruptive nature of the proposed project to the current site and neighboring areas and the estimated long six year duration of the project. Were this ill advised project to be attempted without the City having financial assurance from the developer (perhaps in the form of a bond) that it would be completed would add an additional risk as an interruption in construction, drainage etc. could result in incremental flood and other risks…plus an eyesore of a partially completed project.

We built our home on Fulton Lane (on the former Napa Valley Oriental Nursery site) after investigating the prior history of rejection of development on the Hunter site and the resultant preservation of the levee. We also explored the flood risk in this immediate area and concluded that the levee and existing drainage ditches/swales on Fulton Lane provided a reasonable level of protection. This new Hunter project proposal (which is literally in our backyard) is a significant concern to us for a number of reasons enumerated above and we strongly recommend its permanent rejection.

In conclusion we have been unable to find the benefit to St. Helena and its residents of this proposed development. It all seems like a major step toward impairing the character of St. Helena which makes it a wonderful place to live and turning it into another congested suburb with strained municipal resources. We are totally against the proposed Hunter project.

Thank you, Lou Lavigne and Nancy Rothman 11/1/22

November 1, 2022

City of St. Helena Planning Commission
Vintage Hall Board Room – Second Floor
465 Main Street
St. Helena, CA 94574

Public Comment Re: Item 5.1: Hunter Subdivision Project EIR

Dear Chair Ponte and Commissioners,

The Napa County Bicycle Coalition (NCBC) represents over 2,000 members and supporters throughout Napa County in advocating to make riding a bicycle in our communities safe, convenient, and accessible for riders of all ages and abilities. For over 12 years, the Napa County Bicycle Coalition has worked with local organizations, businesses, elected officials, and the public to align our transportation infrastructure with the needs of cyclists and other active transportation users.

The proposed Hunter Subdivision development, located just a few blocks away from downtown St. Helena and community destinations would provide much-needed market rate and affordable housing. Residents would be well within reasonable walking (<1 mile) or biking (<5 miles) distance of grocery stores, pharmacies, parks, schools, as well as St. Helena City Hall and the St. Helena Public Library. With implementation of adopted Bicycle and Pedestrian Plans, this development could help accelerate the City's progress toward the target active transportation mode share of 20% of trips by 2035 established in these active transportation plans.

The Hunter Subdivision Draft EIR states that the project will induce roughly 800 vehicle trips per day, a "potentially significant" increase in VMT, and claims that there are "no feasible mitigation measures," making it a "significant and unavoidable" impact. The claim that there are no feasible actions to reduce this project's VMT impact is untrue given the development's close vicinity to several destinations that create regular travel (downtown, schools, grocery stores, etc.). One of the most powerful actions to reduce VMT is to provide bicycle and pedestrian facilities that are safe and comfortable for users of all ages and abilities in order to allow people to opt for walking or biking instead of driving – an option which is easy for developers to include, given that the developer has a clean slate to work with when creating new roads.

In order to address the VMT impact and to better align this significant development with City goals around climate, public health and safety, and active transportation, we urge

the Planning Commission to recommend that the City direct the Hunter Subdivision developers to upgrade the planned active transportation facilities for Starr Avenue and Adams Street. While we appreciate that the City has included Class II bicycle lanes on Starr and Adams as a condition of approval, we believe that additional measures must be taken.

In addition to contributing towards City Goals 1, 5, and 6, NCBC's recommendations outlined below act as mitigation measures for the project's significant projected VMT increase.

Adams Street

The City's adopted 2019 Bike Plan proposes a Class I shared-use path on Adams Street east of SR 29, including along a future extension of Adams Street that connects to Starr Avenue. As Adams Street is one of the most significant east-west connections in the City of St. Helena, leading to St. Helena Public Library, Safeway, downtown St. Helena, and St. Helena Elementary School, it is crucial that all modes are provided adequate safety and access along this road. This section of Adams Street will also provide an important connection to the future Vine Trail shared-use path according to current proposed alignments.

We request that the project developers implement the planned Class I along the north side of the Adams Street extension and continue the Class I to at least Library Lane. This option is easily feasible with the 60 feet of Right of Way. We propose that the Class I be constructed by removing the parking lane from the north side of Adams Street, as the north side of Adams along this section (Library Lane to future Starr Avenue) is adjacent only to vineyards and is nonessential. Removing north side parking on Adams Street would free up 8 feet of space. We recommend that with this space, the south sidewalk be widened to at least 6 feet and the remaining space be used to contribute to a Class I on the north side.

The existing businesses on the south side of this corridor segment all have parking lots with adequate parking in addition to on-street parking on the south side. Since no proposed homes will be built on Adams Street, and all of the proposed housing has sufficient parking (3.5 spaces/unit in Lot 52 and two on-site spaces, covered guest parking, and street parking for the rest of the project), abundant parking is provided for residents in the areas around their homes. The proposed parking on the north side of Adams Street bordering the vineyard is superfluous, and the space would better serve the community and help reduce VMT by contributing towards an improved and connected active transportation network.

Starr Avenue

Although the City's adopted 2019 Bike Plan proposes a Class I shared-use path along Starr Avenue, we support the City's condition to install Class II bicycle lanes on Starr Avenue from Hunt Avenue to Adams Street. Class II bicycle lanes on the new segment will continue the existing Class II network on Starr to create a cohesive and understandable bike network along the corridor.

Additionally, we recommend that the sidewalks in the Starr extension be widened from four feet to at least five feet by narrowing the vegetation strips, in order to provide more valuable public space to pedestrians. Four-foot sidewalks are barely large enough to allow two able-bodied people to walk side-by-side. These simply do not provide sufficient space for families to walk together or for pedestrians in wheelchairs or with strollers to navigate other pedestrian traffic. This also reduces access to the social aspect of walking, a significant community health benefit the importance of which the Covid-19 pandemic has only emphasized.

-

Finally, on both Adams Street and Starr Avenue, the City should direct the project developers to implement appropriate traffic-calming measures to reduce vehicle speeding and improve road safety for all road users.

Speeding is already a significant traffic safety concern in St. Helena. As reported by resident comments listed in the DEIR Appendices, Starr Avenue is already used as a cut-through street to avoid SR 29 and Silverado Trail traffic and experiences high volumes of speeding motorists. More broadly in St. Helena, a group of citizens concerned with speeding on existing City streets has already formed and began meeting with the City Police Department to identify actions to reduce speeding. The City approved a contract with GHD to address traffic safety on Madrona and Spring after citizen reports of unsafe motorist behaviors on those streets, namely speeding. Through our Safe Routes to School safety evaluation efforts and several separate conversations with community members, parents in St. Helena have expressed their fear of allowing their children to walk and bike to school due to motorist behaviors such as speeding.

As the street designs are presented in the DEIR, vehicle travel lanes will be 12 feet wide, the same width as the California standard for highways. These streets will be wide, long, and straight, with minimum traffic control and no traffic-calming – similar to Madrona and Spring. We know that such design facilitates motorist speeding and we urge the City

to be proactive on traffic safety by directing the developers to include appropriate traffic-calming on Starr and Adams.

We implore the Commission to recommend that the City ensures that the above recommendations are included in the Hunter Subdivision Project as it moves forward. This project is early enough in the design stages to implement these reasonable changes that will help reduce the significant VMT impact and help St. Helena become more bikeable and walkable.

Should you have any questions about any of the above recommendations, please contact Carlotta Sainato at (707) 258-6317 or csainato@napabike.org. Thank you for your time and consideration.

Sincerely,

Carlotta Sainato
Program Manager
Napa County Bicycle Coalition

Xinia Gamero

From: Mariam Hansen <wartuhi@comcast.net>
Sent: Tuesday, November 1, 2022 4:56 PM
To: Public Comment
Subject: [External] Hunter Project

Hello Ms DeRosa,
Since the planning department is/was ready to schedule a public hearing for the Hunter/Van Phutzen project isn't it time to add it to the planning projects map? I have requested this previously and it is still not on there.
Best,
Mariam Hansen

HUNTER SUBDIVISION CONDITIONS OF APPROVAL 10-31-22

Deleted: 20

Tentative Subdivision Map TM 2022-001
APN 009-030-057

These conditions shall apply to City approval of Tentative Subdivision Map TM 2022-001. However, the only conditions herein that constitute preconditions to the approval of the Final Map are those that explicitly state that they constitute such preconditions, and such conditions may be satisfied through substantial completion, as determined by the City Engineer, by execution of a Subdivision Improvement Agreement, in a form acceptable to the City Engineer, or a combination thereof. Either substantial completion or execution of a Subdivision Improvement Agreement or a combination of both, shall enable the City Engineer to make a determination of substantial compliance with these condition and the Tentative Subdivision Map TM 2022-001.

Planning Division: General Conditions

1. This specific approval is limited to the Tentative Subdivision Map TM 2010-40, and is not intended to serve as an approval of the overall project description that was submitted with the tentative map application.

2. This approval is based upon all conditions of approval set forth herein, including mitigation measures and specified plans and agreements included by reference, as well as all applicable City rules and regulations. Any deviations from the conditions must be reviewed and approved by the City for conformity with this approval. Deviations may require approved changes to these approvals and/or further environmental review. Deviations without the above described approval will constitute a violation of permit approval.

3. Except as specifically authorized in these conditions of approval, the grading, development, use, and maintenance of the property; the size, shape, arrangement, and location of the structures, parking areas and landscape areas; and the protection and preservation of resources shall be subject to Planning Commission approval and shall conform to the conditions of approval below. Notwithstanding the foregoing, the associated grading and construction of infrastructure for the project shall be permitted without Design Review approval if the design of such infrastructure has otherwise been approved by means of the Tentative Map or Final Map. All plans and agreements (such as landscape maintenance plans) required pursuant to these conditions of approval must be submitted for review and approval and shall be implemented as approved by the City.

4. The use and/or construction of any structures or improvements authorized by this approval shall not commence until all necessary planning and building permits pertaining to the use or construction in question are obtained. Before any grading or building permit will be issued by the City, the Owner/Applicant must obtain written clearance from all departments having

conditions; such clearance shall indicate that the Owner/Applicant has satisfied all pre-construction conditions.

5. The Owner/Applicant's acceptance of this permit and/or commencement of use, construction and/or operations under this approval shall be deemed acceptance of all conditions of this approval by the Owner/Applicant.

6. The Owner/Applicant shall ensure that potential contractors are aware of City requirements. The Owner/Applicant shall notify all contractors and subcontractors in writing of the site rules, restrictions, and Conditions of Approval and submit a copy of the notice to the Planning Department.

7. Pursuant to the Municipal Code, Section 16.16.100, the Tentative Map approval is valid for a two (2) year period ending _____, 2024, unless later extended by operation of state law. The Final Map shall be filed by this date or an extension of time shall be requested prior to the expiration date.

8. Pursuant to St Helena Municipal Code, any request for an extension of the Tentative Map must be justified in writing and received by the Planning Department at least twenty (20) days prior to expiration. The time at which such map expires may be extended by the City Council for one year, and on further application twenty (20) days before the expiration of the one year extension, the subdivider may request a second one-year extension, and on further application twenty (20) days before the expiration of the second one-year extension may request a third one-year extension. No extension shall be permitted beyond the third one-year extension.

9. Prior to recordation of the Final Map and subject to City approval as to form and content, the Owner/Applicant shall include all of the mitigation measures and conditions of approval associated with or required by this Project approval on a separate informational sheet(s) to be recorded with the Final Map. All applicable conditions and mitigation measures for the Project shall be printed on grading and/or building plans.

10. Compliance with all permit conditions shall occur in accordance with specific regulations but in all cases not later than prior to occupancy or initiation of use unless another time is set by law or by this approval. Occupancy or final inspection of a project may be withheld if all conditions, including payment of fees for services rendered by the City, are not met.

11. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim,

action, or proceedings and the City cooperates fully in the defense of the action or proceedings.

12. This Tentative Parcel Map shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.

13. If the Tentative Map is proposed to be revised, including revisions to these conditions of approval, the revisions shall be approved pursuant to and in accordance with Section 16.16.130 of the St. Helena Municipal Code.

14. The primary purpose of this review is for compliance with the General Plan and Zoning Ordinance. The owner/applicant is responsible for meeting with the Building Official/Fire Inspector to review compliance with Building and Fire Codes, including fire protection systems and the accessibility standards of Title 24.

15. All required fees, including planning fees, development impact fees, park impact fees, and building permit fees shall be paid prior to issuance of building permit unless such payment has been modified by adopted mitigation measures or conditions of approval. Fees shall be those in effect at the time of the issuance of the building permit.

16. This authorizes the creation of a tentative subdivision of a 16.92-acre parcel (APN 009-030-057) located at the north/east terminus of Adams Street into 52 lots. In addition, two lettered lots are created: Parcel A (0.06 acres) is an open space lot adjacent to an internal roadway; Parcel B (0.04 acres) will contain a private water well to be used for irrigation of landscaped areas.

17. All uses of the property shall be in compliance with the MR: Medium Density Residential zoning district regulations.

18. The applicant shall be responsible for compliance with all mitigations measures adopted as part of this project and listed in the Environmental Impact Report and Mitigation Monitoring and Reporting Program (MMRP) adopted as part of this project.

19. All conditions of approval shall be clearly identified and included on all plans submitted for future permit review and issuance.

20. Prior to applying for building permits, proposed future development on any of the newly created lots or parcels shall require the approval of a Design Review application and Use Permit application as applicable, subject to discretionary review by the Planning Commission.

21. The Applicant shall be responsible for all City plan check and inspection costs as described in the St. Helena Comprehensive Fee and Rate Schedule.

Planning Division: Final Map Conditions

22. The owners of the 51 single family residences shall be members of a homeowner's association dedicated to the maintenance of the project's common areas, the landscaping of the front yards of each of the single-family homes, the internal irrigation system (fed by the well on Parcel B), and the well on Parcel B.

23. Prior to recordation of the final map and concurrent with the Subdivision Improvement Plan, the applicant shall submit CC&R's (Codes, Covenants and Restrictions) to the City Attorney, Public Works Director and Community Development Director for review and approval. CC&R's shall be recorded at time of recordation of final map. CC&R's shall include all restrictions and maintenance regulations pertaining to, landscaping and common areas; shall include all restrictions and maintenance agreements pertaining to roads and access easements; and all restrictions and maintenance agreements pertaining to the irrigation well and internal irrigation water distribution system. The CC&Rs must be recorded prior to issuance of any building permit for any structure on the project site.

24. Pursuant to Section 16.20.090, upon approval of the final map by the City Council, the City Clerk shall execute the appropriate certificate on the certificate sheet and shall, subject to the provisions of Section 66464 of the state Subdivision Map Act, transmit the map, or have an authorized agent forward the map, to the county recorder prior to the issuance of a building permit.

25. Prior to issuance of a Certificate of Occupancy, all overhead utilities on the site shall be undergrounded.

Planning: Misc. Conditions

26. Prior to issuance of building permits, the applicant shall develop a building construction plan to be approved by the Planning Director and Building Official to insure that the homes exceed Title 24 Energy Efficiency Standards and receive a green rating under either the LEEDS, Green Points Checklist, or other acknowledged rating system for energy conservation and green building practices. The latest version of the City of St. Helena green building standards will apply at the time of building permit submittal.

27. Prior to approval of the Final Map, the applicant shall enter into an Affordable Housing Agreement with the City of St. Helena, which agreement shall be subject to review and approval by the St. Helena City Council. The Affordable Housing Agreement shall be recorded in the Official Records of Napa County, and shall ensure that the project complies with the requirements of Municipal Code section 17.146.050, Residential development project, inclusionary/in-lieu fee requirements. The Affordable Housing Agreement shall demonstrate how the project satisfies the minimum density requirement of the General Plan to construct a minimum of 87 dwelling units, including single family, multifamily, and accessory dwelling units.

Planning: Flooding Conditions

28. Prior to issuance of building permits, the occupant shall prepare a statement that has been approved by the Public Works Director for inclusion in the disclosure documents provided to purchasers of homes which describes the flood risk present at this location and notifies the buyer of the availability of low-cost Preferred Risk Policy flood insurance.

Planning: Landscape Conditions

29. City of St. Helena Community Development Department shall review the final landscape and fencing plan as part of a Design Review approval and prior to issuance of building permits for construction on the property to ensure compliance with Mitigation Measures. Landscaping shall be native, drought tolerant, compatible with oak trees and requiring minimal irrigation.

30. Landscape plans shall comply with the State of California Model Water Efficient Landscape Ordinance and Section 17.112.140 of the St Helena Municipal Code. Plans shall be designed and verified by a landscape professional and shall include drought tolerant landscaping and low water irrigation systems. Landscaping shall not block vision from exits or at street intersections.

Planning: Construction Activities Conditions

31. Mechanical equipment, including heating and air conditioning units and spa equipment, shall be located away from property lines and shall be shielded or enclosed to minimize noise levels. Noise generated shall not exceed 60 dBa, Ldn.

32. The applicant and/or construction manager shall notify all contractors and subcontractors that no trespassing is allowed on adjoining properties.

33. To reduce disturbance of residents in the project vicinity, construction activities which generate noise that can be heard at the property line of any parcel of real property within the City limits shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Saturday. Delivery of materials/equipment and cleaning and servicing of machines/equipment shall be limited to 7:00 a.m. to 6:00 p.m. Exceptions to these time restrictions may be granted by the Public Works Director for one of the following reasons: (1) inclement weather affecting work, (2) emergency work, or (3)other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance. The City Engineer must be notified and give approval in advance of such work. No construction activities shall occur on Sundays or federal or local holidays that generate noise that can be heard at the property line of any parcel of real property within the City limits.

34. This property in the vicinity of an agricultural district. All future purchasers of homes or renters living in the project shall be notified of the expectation of legal, normal agricultural activities on the adjacent land, including day or night disbursement of chemicals, and creation of dust, noise, or fumes, and of the City's Right to Farm ordinance.

Public Works: General Conditions

35. Prior to recordation, the Final Map shall be designed to the satisfaction of the Public Works Director to accommodate the following facilities in the right of way of both Starr Avenue and Adams Street:

    - Curb and Gutter in accordance with City Standard #310 for a 24" gutter.
    - Sidewalks on both sides of the street along Starr Avenue, and only on the south side of Adams Street, in accordance with City Standard #315
    - Parking lane on both sides of the street in accordance with City Standard #301 for a "Collector" street.
    - Class II on-street bike lane on both sides of the street in accordance with Caltrans' Highway Design Manual Index 1003.2 but not less than 5 feet wide.
    - Two vehicle travel lanes in accordance with City Standard #301 for a "Collector" street.
    - Striping to delineate parking, bike, and travel lanes.

36. All public improvements utility connections shall be designed in accordance with the City of St. Helena's Construction Standards (SHMC 16.32.230).

37. The City has adopted the latest edition of the Bay Area Stormwater Management Agencies Association (BASMAA) Post-Construction Manual. Applicant is responsible for conformance construction plans in accordance with the BASMAA Manual, SHMC Section 13.32 et. seq., and the State Water Resources Control Board Phase II Municipal Separate Storm Water System (MS4) General Permit (Order 2013-0001 DWQ). Approval of project by Planning Commission does not constitute compliance with storm water regulations nor a right to develop per approved plans unless this condition of approval is fully satisfied.

38. Grading plans, public improvement plans and connections to public utilities shall be prepared by a California Licensed Civil Engineer.

39. An Encroachment Permit is required prior to starting work within City right of way.

40. All public facilities damaged by construction activities shall be the responsibility of the Applicant and shall be repaired to the satisfaction of the City at the Applicant's expense.

41. During water shortage emergencies, all construction water used for the project shall be obtained from a source other than a City of St. Helena potable water sources (SHMC 13.04.221).

42. Unless exempted, any ADU or JADU constructed with a new single-family home shall have a separate utility connection directly between the ADU or JADU and the utility and payment of the normal connection fee and capacity charge for a new dwelling are required SHMC 17.116.030(G)(2).

43. Developer shall design and construct all improvements and facilities shown on any approved tentative map, site plan, or other documents submitted for permit approval, in accordance with the St. Helena Municipal Code (SHMC), and the City of St. Helena Design and Construction Standards. Approval of a tentative map depicting improvements that do not conform to the SHMC or City standards does not constitute approval of an exception to the SHMC or City standards unless explicitly stated herein or in another City resolution.

44. The developer shall be responsible for all City plan check, map check and inspection costs. The developer shall deposit funds with the City upon the initiation of plan check services. The amount of the initial deposit shall be determined by the City Engineer. Additional funds may be required based upon actual plan check and inspection costs.

45. If any of the improvements which the applicant is required to construct or install is to be constructed or installed upon land in which the applicant does not have title or interest sufficient for such purposes, the applicant shall do all of the following at least 60 days prior to the filing of the final or parcel map for approval pursuant to Government Code Section 66457:

    a) Notify the City of St. Helena (hereafter "City") in writing that the applicant wishes the City to acquire an interest in the land which is sufficient for such purposes as provided in Government Code Section 66462.5;

    b) Supply the City with (i) a legal description of the interest to be acquired, (ii) a map or diagram of the interest to be acquired sufficient to satisfy the requirements of subdivision (e) of Section 1250.310 of the Code of Civil Procedure, (iii) a current appraisal report prepared by an appraiser approved by the City which expresses an opinion as to the current fair market value of the interest to be acquired, and (iv) a current Litigation Guarantee Report;

    c) Enter into an agreement with the City, guaranteed by such cash deposits or other security as the City may require, pursuant to which the applicant will pay all of the City's cost (including, without limitation, attorney's fees and overhead expenses) of acquiring such an interest in the land.

46. Prior to the issuance of a Certificate of Occupancy, all proposed utilities, both on-site and along project frontages, shall be placed underground. This does not include surface mounted transformers, pedestal mounted terminal boxes and meter cabinets.

47. Except for the existing well on Lot 19 of the Tentative Map that will be providing irrigation water to this development, all existing wells, septic tanks and/or underground fuel storage tanks shall be abandoned under permit and inspection of Napa County Department of Environmental Health. If applicant determines that there are none, prior to the issuance of a grading permit, the project engineer shall provide a letter describing the scope of the search done to make this determination and demonstrating to the reasonable satisfaction of the City

Engineer that there are no other existing wells, septic tanks and/or underground fuel storage tanks within the boundaries of the Tentative Map.

Public Works: Fees

48. Public Works engineering and inspection fees for Improvement Plan and Final Map review shall be due and payable at the time of making the first submittal in connection with the Improvement Plans or the Final Map, as applicable.

49. All Public Works Development Impact fees shall be due and payable at the time of issuance of building permit(s) for the improvements to which they are applicable, unless otherwise authorized by the City.

Public Works: Improvement Plan and Construction Conditions

50. Improvement plans shall be prepared and submitted by a California Registered Civil Engineer for the construction of all necessary and required on-site and off-site improvements including grading, water, sanitary sewer, storm drain facilities, roadway improvements, curbs, gutters, sidewalks, parkway strips and streetlights. All design and construction shall conform to the City of St. Helena Design and Construction Standards, as applicable.

51. Per Mitigation Measure GEO-1, a detailed Soils Investigation/Geotechnical Report (the "Soils Report") shall be prepared and submitted for review with the submittal of the improvement plans. The report shall address, at a minimum, potential for liquefaction, expansive soils, seismic risk, recommendations for roadway structural sections, foundation, and other items as mentioned in the Mitigation Measure. The improvement plans shall incorporate all design and construction criteria recommended in the Geotechnical Report and acknowledgement of inclusion of any recommendations in the soils report applicable to improvements within this development shall be included on a signature line for the Geotechnical Engineer on the cover sheet of the improvement plans. The signature line should include a statement that the Geotechnical Engineer has reviewed the plans and that the plans have incorporated recommendations as outlined in the Soils Report.

52. All private water mains, sewer mains and storm drains shall be clearly labeled "Private" on the improvement plans.

53. Improvements plans shall include a storm water pollution prevention plan. Erosion control measures shall be included within the improvement plans and the projects WDID number shall be included on the cover sheet of the improvement plans.

54. The improvement plans shall include the following note per the *Engineering Controls* portion of Mitigation Measure NOI-1: "All mobile and stationary construction equipment employing an internal combustion engine shall be equipped with suitable exhaust and intake silencers which are in good working order."

55. Roadway Improvements:

    a. The structural section of all road improvements shall be designed based upon a geotechnical investigation that provides the basement soils R-value and expansion pressure test results. A copy of the geotechnical report shall also be submitted with the first set of improvement plan check-prints.

    b. Where new roadway improvements abut existing paving and sidewalk, curb and gutter, the existing pavement and concrete curb and gutter section shall be saw-cut and reconstructed to provide a smooth conforms conform. The limits of such reconstruction shall be as determined by the City Engineer.

    c. Pavement markings and signage shall be provided on all streets as necessary and as required by the City Engineer. Signage restricting parking and red painted curbing shall be installed where appropriate. Speed limit signs and other regulatory and informational signs shall be installed at locations determined by the City Engineer.

    d. Street lighting shall be designed to provide to meet safety requirements and minimize glare. Street light standard and luminaries of the design, spacing, and locations shall be approved by the City Engineer. All lighting must have shields.

    e. Ramps for disabled persons meeting the most recent standards shall be provided at all intersections and at the limits of the improvements where they do not adjoin existing sidewalk improvements. Sidewalk warps shall be provided as necessary to allow a clear four-foot-wide walkway at all locations, including areas where mailboxes, streetlights, and fire hydrants obstruct sidewalks.

56. In accordance with mitigation measure BIO-1 of the approved environmental document, a qualified biologist shall conduct a habitat assessment for bats in trees adjacent to the Project site within 2 weeks prior to any Project construction (site clearing, grading). The habitat assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site and 50 feet around these areas. Potential roosting features found during the survey shall be mapped and described in a survey letter report. If roosting bats (individuals or colonies) are detected within the Project site, California Department of Fish and Wildlife shall be notified as soon as possible prior to any construction activity to confirm the bats can be avoided during construction. If a bat roosting or maternity colony cannot be completely avoided, a qualified biologist shall prepare a bat mitigation and monitoring plan for California Department of Fish and Wildlife review and approval, and that plan shall be implemented prior to commencement of construction that could impact the roosting bats or maternity colony. A written report of the findings shall be provided to the City prior to grading.

57. In accordance with mitigation measure BIO-2 of the approved environmental document, if construction activities are scheduled to occur during the breeding season for birds (February

1 through August 31), prior to commencement of construction the Project applicant or their contractor shall implement the following measures to avoid potential adverse effects to nesting raptors and other nesting birds:

- Preconstruction surveys by a biologist of all potential nesting habitats within 500 feet of construction activities, where accessible, shall be conducted by a qualified biologist. Surveys shall occur no more than 14 days prior to the initiation of site disturbance. If construction is stopped for 14 days or more during the breeding season, a new preconstruction nesting bird survey must be conducted before work can be restarted to ensure no new nesting has occurred in the interim.

- If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required, following submittal of a survey report letter to the City of St. Helena Planning Department.

- If active nests are found during preconstruction surveys, a no-disturbance buffer shall be created around active nests during the breeding season or until it is determined by the biologist that all the young have fledged. The buffers shall be established by the biologist in conjunction with the California Department of Fish and Wildlife. Typical buffers may include 500 feet for raptors and 50 to 250 feet for other bird species based on the location of the nest, the nesting species present, and types of construction activities that may cause potential nest abandonment. The perimeter of the buffer zone shall be fenced or marked with staked flagging.

58. In accordance with mitigation measure BIO-3 of the approved environmental document, wetland permits (e.g., 404 Nationwide Permit, 401 Water Quality Certification, and 1602 Streambed Alteration Agreement, respectively) shall be obtained prior to any grading work. Prior to issuance of a grading permit, the Project applicant shall demonstrate authorization from the Army Corp of Engineers and any other regulatory agency to alter the wetland.

59. Prior to the commencement of grading, the developer shall provide evidence that an archaeological monitor has been retained to be present on the site during all ground-disturbing activities per mitigation measure CUL-1.

60. Per mitigation measure CUL-2 of the approved environmental document, if human remains are unearthed during grading operations, work must stop within 100 feet of the find and the county Coroner shall be contacted immediately.

61. Per mitigation measure GEO-2 of the approved environmental document, if known or suspected paleontological resources are unearthed during grading or trenching operations, the area of discovery shall be roped off by the contractor to include a 50-foot radius buffer and remain off-limits until cleared by a qualified paleontologist.

62. Per mitigation measure HAZ-1 of the approved environmental document, the Project applicant shall ensure the following subsurface soils testing and follow-up analysis be performed prior to obtaining a grading permit:

    - A soils testing work plan shall be developed in accordance with DTSC's Interim Guidance for Sampling Agricultural Properties (DTSC 2008) by an appropriately licensed individual (i.e., professional geologist, environmental engineer, or similar qualification) for the portions of the Project site historically used for agriculture. Special consideration shall be given to targeting site soils that are representative of historic agricultural use, and to avoid sampling recent fill material placed during levee construction. Prior to carrying out soils testing, the work plan shall be submitted to the Napa County Division of Environmental Health (as the Certified Unified Program Agency for all cities and areas of Napa County) and the City of St. Helena for review and approval.

    - The number of soil samples, sampling methods, compounds tested, background samples (if applicable), and laboratory analyses shall be completed in accordance with DTSC's Interim Guidance. Should analytical results exceed naturally occurring concentrations or applicable CHHSLs, the health risks of such a condition shall be evaluated in human health risk assessment as described in DTSC standards and guidance (e.g., preliminary endangerment assessment guidance manual). • The risk assessment shall describe measures that must be implemented to ensure potential health risks to construction workers, site residents, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than one in one million for carcinogens and a cumulative hazard index of 1 for non-carcinogens, or as required by the Napa County Division of Environmental Health acting as the Certified Unified Program Agency and/or DTSC oversight. In the event human health risk assessment shows elevated chemical concentrations pose a risk to human health or the environment, the risks shall be eliminated or substantially reduced by removal (e.g., excavation of soils and off-site disposal) or remediation of contaminated soils, and/or implementation of institutional controls and engineering controls (IC/EC). IC/EC may include use of a construction risk management plan, use of hardscape to cap problem areas, importation of clean soil in landscaped area to eliminate exposure pathways, and/or deed restrictions. If IC/EC are implemented, an Operations and Maintenance Program shall be prepared and implemented to ensure that the measures adopted are maintained throughout the life of the Project.

63. Per mitigation measure NOI-1 of the approved environmental document, the contractor shall implement the following for onsite noise control and sound abatement means that, in aggregate, would yield sufficient construction noise reduction during the site preparation, grading/excavation, and building construction phases of the Project to ensure compliance with the FTA-based guidance standard of 90 dBA hourly Leq at or beyond the property lines of the nearest residences, as noted.

    Administrative Controls – At all times during site preparation and construction:

- Comply with Chapter 8.24 of the Municipal Code with respect to allowable construction periods,
- Minimize idling time of onsite equipment, and
- Either locate onsite stationary construction equipment (such as generators or air compressors) as far from adjacent residential property boundaries as is feasible or place this equipment inside an approved noise-attenuating casing (e.g., sound-attenuated air intakes and heat vents, exhaust mufflers, etc.), or place this equipment indoors.

Engineering Controls – All mobile and stationary construction equipment employing an internal combustion engine shall be equipped with suitable exhaust and intake silencers which are in good working order; and

Install Sound Abatement – During site preparation and construction which involves the operation of more than two pieces of heavy equipment (dozer, backhoe, front-end loader, crane, tractor, etc.) for at least one hour and when operating within 25 feet of the exterior of a residence (either offsite or onsite), do the following:

- Erect a temporary barrier (i.e., plywood sheet) or install sound blankets (or comparable temporary solid barriers) on the Project's construction fencing, or
- Locate sound path intervening containers or trailers onsite to block direct line-of-sight between residences and the operating heavy equipment.

Public Works: Improvement Plan and Construction Conditions

64. Starr Avenue: Prior to the issuance of a Certificate of Occupancy, Starr Avenue shall join the existing Starr Avenue at Hunt Avenue and shall be improved to include the facilities listed in condition of approval #58. The structural section of the street shall be per recommendations contained in the Soils Report.

65. Adams Street: Prior to the issuance of a Certificate of Occupancy, Adams Street shall join the existing section of Adams Street (currently a dead end) and be extended into the subdivision. The street shall be improved per condition of approval #58. At the northerly terminus of Adams Street, a conform shall be constructed with Class 2 aggregate base to connect to the existing walking path/access road/levee. A gate shall be included at the terminus of the road and connection to the walking path/access road that has appropriate signage indicating it is not a through road for vehicles. The gate shall be constructed per direction from the Fire Chief and shall include a Knox box. The structural section of the street shall be per recommendations contained in the Soils Report.

66. Street A: Prior to the issuance of a Certificate of Occupancy, Street A shall be improved to include two 10 ft. travel lanes, two 8 ft. parking lanes, curbs, gutters, a 6 ft. planter strips and

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4 ft. sidewalk on the south side of the road and a 10-foot distance from the face of curb to the right-of-way line on the west side of the road. The total right-of-way width shall be 56 feet. The area between the curb and the right-of-way line on the west side of the street shall be graded such that it can be passable by pedestrians (cross slopes should not exceed 5%). The structural section of the street shall be per recommendations contained in the Soils Report.

67. Streets B and C: Prior to the issuance of a Certificate of Occupancy, Streets B and C shall be improved to include two 10 ft. travel lanes, two 8 ft. parking lanes, curbs, gutters, 6 ft. planter strips and 4 ft. sidewalks within an overall 56 ft. right-of-way. The cul-de-sac associated with Street C shall be constructed per City Standard 304. The knuckle at the intersection of Streets B and C shall be constructed per City Standard 305. The structural section of the street shall be per recommendations contained in the Soils Report.

68. EVA: From Street A to levee: Prior to the issuance of a Certificate of Occupancy, the emergency vehicle access road (EVA) shall be improved to provide an all-weather access road (paved) from Street A up to the existing levee road to the north. The width of the EVA shall be a minimum of 21 feet from face of curb to face of curb within an overall 25 ft. wide dedicated EVA. The EVA shall accommodate emergency vehicles (must provide for turning radii to accommodate fire vehicles as per the Fire Department requirements.) Turning templates shall be provided with the improvement plans during the plan check process to ensure the EVA can accommodate Fire Department apparatus.

69. Access from Lot 52 to Starr Avenue shall be for EVA and pedestrian purposes. Ownership of this parcel shall be the same as Lot 52, or the access point shall be made part of Lot 52.

Deleted: at a minimum, the same width and configuration as the EVA. If pedestrians are to use this access point, pedestrian facilities (min. 4-foot sidewalk) shall be provided adjacent to one side of the roadway. If a sidewalk is included, overall width of this parcel shall be at least 31 feet

70. Adjacent to Lot 51 there is a portion of existing right-of-way that needs to be vacated by the City prior to the recordation of the final map. The applicant shall provide all descriptions and plats to the City for vacation of this right-of-way. The vacation of the right-of-way by the City of St. Helena shall either be done prior to or concurrently with the recordation of the final map.

71. Per Mitigation Measure AES-1, all streetlights shall include shields and downward focused to reduce glare and spillover light and to minimize effects on wildlife and to retain the rural ambience of the development.

Public Works Water and Sanitary Sewer Improvements Conditions

72. As detailed in the Final EIR for the project, the Developer is required to off-set the Project's water demand of 37.04 AFY. The Project's landscape water demand is estimated at 17.16 acre-feet per year, which is within the capacity of the existing on-site well. Due to the new potable water demand on the City system in the amount of 19.8 AFY, the Developer shall implement an alternative innovative method of mitigating water use as allowed under Section 13.12.030(B) of the SHMC and/or Appendix J of the EIR. The required improvements to offset water demand are as follows: Identify and implement offsite improvements that

reduce water loss from the public water distribution system and/or identify and implement offsite improvements that result in a net increase in potable water availability equivalent to 19.8 AFY, or a combination of these. No building permit may be issued until the City has confirmed that the Developer has completed the approved measures and such measures have been accepted by the City, or Developer has entered into a public improvement agreement with the City to ensure the completion of such improvements and provided security in one of the forms described in Government Code section 66499 in an amount equal to the estimated cost of construction of the proposed offsite improvements as determined, or reviewed and approved, by the City Engineer. Any public improvements shall be constructed to St. Helena Public Works Construction Standards whenever applicable.

73. Any modifications to the existing well other than the installation or maintenance of pumping and storage equipment and connection to the onsite irrigation water distribution system, shall require a permit per section 13.16.060 of the St Helena Municipal Code.

74. The Final Map shall include easements to provide for the installation of the private onsite water system connected to onsite well.

75. All homes and the proposed multi-family parcel shall be served by the onsite well for landscaping and other outdoor water use. Only interior fixtures may be served by City of St. Helena domestic water.

76. All parcels must be connected to the internal irrigation well for outside uses, including landscape irrigation and exterior hose bibs.

77. The Applicant shall make written application to the City of St. Helena in conformance with Chapter 13.04 of the St. Helena Municipal Code for Water Service to the new parcels.

78. The applicant/owner shall be required to install water mains and service lines to serve the project parcels with City water. All water mains and lines within the public right of way shall be constructed in conformance with City standards.

79. The applicant/ owner shall make written application to the City of St. Helena for annexation to the Sewer District and for Sewer Service to the new parcels in conformance with Chapter 13.20.070 of the St. Helena Municipal Code.

80. All public water and sewer mains must be located in public right-of-way wherever possible. Where public water and sewer mains must be located on private property, all necessary easement dedications must be made part of the final map or by separate document (if outside of the boundaries of the final map) prior to final acceptance of the improvements by the City.

81. Sewer grades must be designed such that ultimate finished floors are a minimum of 12” above upstream manhole or clean-out rim elevations. Inadequate elevation differentials or grade on private laterals, as determined by the City, must be mitigated by either raising finished

floor elevation(s) or installing privately owned and operated sewer lift station(s) with grinder/ejector pump(s) on site.

82. All water improvements shall conform to the City standards.

83. The existing 10 ft. public waterline easement shall be abandoned by separate document once the relocated water line has been built and is operational.

84. Prior to the first Certificate of Occupancy, the existing 12-inch waterline running through the development shall be relocated to Starr Avenue by the applicant/developer. At the westerly end of Starr Avenue, the line shall be reconnected to the existing 12-inch waterline outside north of Lot 46.

85. The proposed well and appurtenances (pump, etc.) for this development shall be owned and operated by the Homeowner's Association for this development. The well shall supply irrigation water for all landscaping of common areas and on all lots within the subdivision to limit use of domestic water produced by the City. Signage shall be provided on each lot warning of the use of well water and that the well water shall not be used for domestic purposes. Piping for all irrigation water from the well shall be purple pipe (same as used for recycled water). Also, disclosure statements (either through disclosures as required by the Department of Real Estate or on the final map) shall be provided to all property owners notifying them about use of well water and statements warning that well water should not be used for domestic purposes.

86. The sewer easement on lot 21 shall be a minimum of 15 feet wide and shall be located entirely within Lot 21. Statements shall be included on the final map precluding any permanent structures from being constructed within this easement. The sewer line shall be connected to the existing sewer main in Paseo Grand Drive.

Public Works Drainage Improvements Conditions

87. Prior to the issuance of the first building permit, all City-required improvements related to storm water for the project shall be installed by the project developer at its expense. Drainage improvements shall be designed and funded by the developer in accordance with the Design Criteria utilizing the rationale method and any applicable adopted City drainage plans.

88. Prior to the issuance of the first building permit, the applicant shall submit for review and approval, drainage plans and hydraulic calculations prepared by a Registered Civil Engineer. The drainage plans and calculations shall indicate the following conditions before and after development:

    - Quantities of water, water flow rates, major water courses, drainage areas and patterns, diversions, collection systems, flood hazard areas, sumps and drainage courses.

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89. Post-development flows leaving the site shall not exceed pre-development flows.

90. Prior to building permit issuance, the applicant shall provide to the City an analysis of the capacity and condition of existing drainage facilities downstream of the development (including any detention/retention ponds), including recommendations for off-site drainage improvements, which shall be constructed prior to the issuance of the first certificate of occupancy. Site grading and drainage improvements shall be shown on the improvement plans.

91. The 100-year overflow and pipeline easement on Lot 25 shall be dedicated on the final map and language shall be included on the final map prohibiting any permanent structures (including garages, sheds, swimming pools, etc.) from being constructed within the easement, as well as provisions (including requirement regarding grading) that ensure that Lot 25 remain in a condition such that it allows relief for the 100-year storm overflows.

92. Prior to Final Map recordation, the developer shall obtain a construction easement from the City over Parcel 009-030-019 to construct the drainage improvements, wall, and fence on lots 5-20. The drainage ditch on Lots 5-20 shall be privately owned and maintained.

Public Works Final Map Conditions

93. A final map, as defined in the State Subdivision Map Act, shall be prepared by a licensed surveyor or civil engineer, showing all parcels, rights-of-way, and easement(s) shall be filed with the City Engineers Office. The final map shall be substantial conformance with the approved Tentative Map and all applicable conditions of approval. The final map is not valid until it has been approved and recorded.

94. Prior to building permit issuance, the developer shall secure all necessary rights-of-way and easements for both onsite and offsite improvements. Rights-of-way and easements shall be dedicated on the map or provided by separate instrument. The developer shall prepare all necessary legal descriptions and deeds. Offers of dedication shall be either via easement or fee title).

95. The applicant shall transmit by certified mail a copy of the conditionally approved Tentative Map together with a copy of Section 66436 of the State Subdivision Map Act to each public entity or public utility that is an easement holder of record. Written compliance shall be submitted to the City of St. Helena

96. The final map shall not be approved prior to approval of the Subdivision Improvement Plans.

97. Prior to approval of the final map, the developer shall either complete required improvements in accordance with the approved improvement plans or enter into a Subdivision Improvement Agreement with the City. A certificate of occupancy shall not be issued for any structure until required improvements are completed to the satisfaction of the City Engineer.

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Deleted: issuance of a grading permit, easements from all of the existing adjacent property owners backing up to Lots 5-20 shall be obtained to allow for the construction and long-term maintenance of the proposed ditch at the base of the retaining wall as depicted in Section 2 on page TM4 of the Tentative Map.

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98. Abandonment of existing 10-foot public water easement crossing the property shall be included on the final map or by separate document.

99. The unnumbered lot between Lots 3 and 4 as shown on the Tentative Map shall be included as part of Lot 52 and shall not be a separate lot.

Public Works Construction Conditions

100. No grading or other construction shall be performed until the improvement plans have been approved and signed by the City Engineer. Encroachment Permits and Building Permits will not be issued prior to the approval of the improvement plans. An Encroachment Permit is required for any work within the City's rights of way.

101. The developer shall keep adjoining public streets free and clean of project dirt, mud, materials, and debris during the construction period, as is found necessary by the City Engineer.

102. Prior to the issuance of a grading permit, the developer shall provide evidence that a Notice of Intent has been submitted and received by the Regional Water Quality Control Board for a General Construction Activity Storm Water Permit. A copy of the project Storm Water Pollution Protection Plan shall be submitted to the City.

103. If any hazardous waste is encountered during the construction of this project, all work shall be immediately stopped and the Napa County Environmental Health Department, the Fire Department, the Police Department, and the City Inspector shall be notified immediately. Work shall not proceed until clearance has been issued by all of these agencies.

104. Prior to final preparation of the subgrade and placement of base materials, all underground utilities shall be installed and service connections stubbed out behind the sidewalk. Public utilities, Cable TV, sanitary sewers, and water lines shall be installed in a manner which will not disturb the street pavement, curb, gutter and sidewalk, when future service connections or extensions are made.

105. Where soil or geologic conditions encountered in grading operations are different from that anticipated in the soil and/or geologic investigation report, or where such conditions warrant changes to the recommendations contained in the original soil investigation, a revised soil or geologic report shall be submitted for approval by the City Engineer. It shall be accompanied by an engineering and geological opinion as to the safety of the site from hazards of land slippage, erosion, settlement, and seismic activity. Additionally, if field conditions warrant installation of any subdrains, the location, size and construction details must be provided to the City for review and approval prior to construction.

106. Prior to placing the final lift of asphalt, all public sanitary sewer lines shall be video inspected at the expense of the contractor/developer. All video tapes shall be submitted to the City.

If any inadequacies are found, they shall be repaired prior to the placement of the final lift of asphalt.

107. All streets, curbs, gutters, sidewalks or other public facilities damaged in the course of construction associated with this development shall be the responsibility of the Developer and shall be repaired to the satisfaction of the City at the Developer's expense.

108. The applicant shall submit a proposed haul route for all trucking associated with this project to the City Engineer for review and approval prior to issuance of a grading permit.

109. Dust control must be maintained to the City's satisfaction.

110. A certificate of occupancy shall not be issued for any structure until required improvements are completed to the satisfaction of the City Engineer.

Public Works Subdivision Final and/or Release of Securities Conditions:

111. All public improvements shown on the Improvement Plans shall be completed and accepted by the City prior to release of any security posted.

112. All punch-list work shall be completed, and any outstanding inspection fees or other charges shall be paid prior to issuance of any certificate of occupancy or prior to acceptance of the improvements, at the discretion of the City.

113. Video inspections shall be made of all storm drain and sewer lines installed by developer as set forth in the approved improvement plans to ensure that they are clean of dirt, rocks, debris or other material. Contractor/developer shall be responsible for cleaning and flushing all storm drain lines prior to acceptance by the City. If flushing of the storm drain system is required, the contractor/developer shall put sufficient plugs/filters in place to ensure that any debris, mud or other material is not washed beyond the piping system in the subdivision nor into any natural water course. A copy of the DVD of all storm drain lines shall be delivered and reviewed by the City prior to acceptance. This condition shall be satisfied prior to issuance of any certificate of occupancy or prior to acceptance of the improvements, at the discretion of the City.

114. Developer shall provide sufficient security guaranteeing the public improvements for a period of one year.

115. A complete set of As-Built or Record improvement plans showing all substantial changes from the original plans shall be certified by the Civil Engineer of record and submitted to the City Engineer prior to acceptance of the public improvements.

116. Prior to acceptance of the public improvements, the developer shall provide a written statement signed by his or her engineer certifying that they observed the work during construction and that site grading and all private site improvements have been completed in accordance with the improvement plans approved by the City Engineer.

117. Prior to acceptance of the public improvements, the developer shall provide a written statement signed by his or her geotechnical engineer certifying that they observed the work and reviewed testing results, and that all of work was performed in accordance with the recommendations included in the Soils Report or other recommendations necessitated by field conditions.

Fire Department Conditions

118. Prior to the issuance of a Certificate of Occupancy, the developer is responsible for fire hydrants to be included and installed within the development (number, location and spacing) to the satisfaction of the Fire Department. Locations of the fire hydrants shall be approved by the Fire Department prior to approval of the final map.

119. Plans submitted for building permit shall exhibit compliance with the current St. Helena Fire Code, as adopted and codified in St. Helena Municipal Code Chapter 15.36.

120. Prior to issuance of future building permits, all construction plans for homes and other structures shall include fire sprinklers as required by the City of St. Helena Fire Department.

121. One hour minimum fire-resistant construction on all exterior walls within 10' of property boundary is required. Fire resistant construction of interior walls shall be determined by type of occupancy.

122. Any gates installed to control vehicular access to a property are required to be setback 30-feet from the property line and/or edge of pavement, whichever is greater. No vehicle gates may be installed without Fire Department and Public Works Department review and explicit approval.

123. Access to the levee road is restricted for public use and only granted to emergency vehicles and emergency egress for Vineyard Valley Mobile Home Park residents. Signage prohibiting its use by the public is recommended. Public access will be granted at the discretion of the Authority Having Jurisdiction during emergencies/evacuations.

HUNTER SUBDIVISION

Request by Ben and Kelly Vanzutphen to subdivide a 16.9-acre parcel to establish 51 single-family residential lots and one parcel for future multi-family development

(Tentative Map #2022-001)

Community Development Department

Nov. 1, 2022

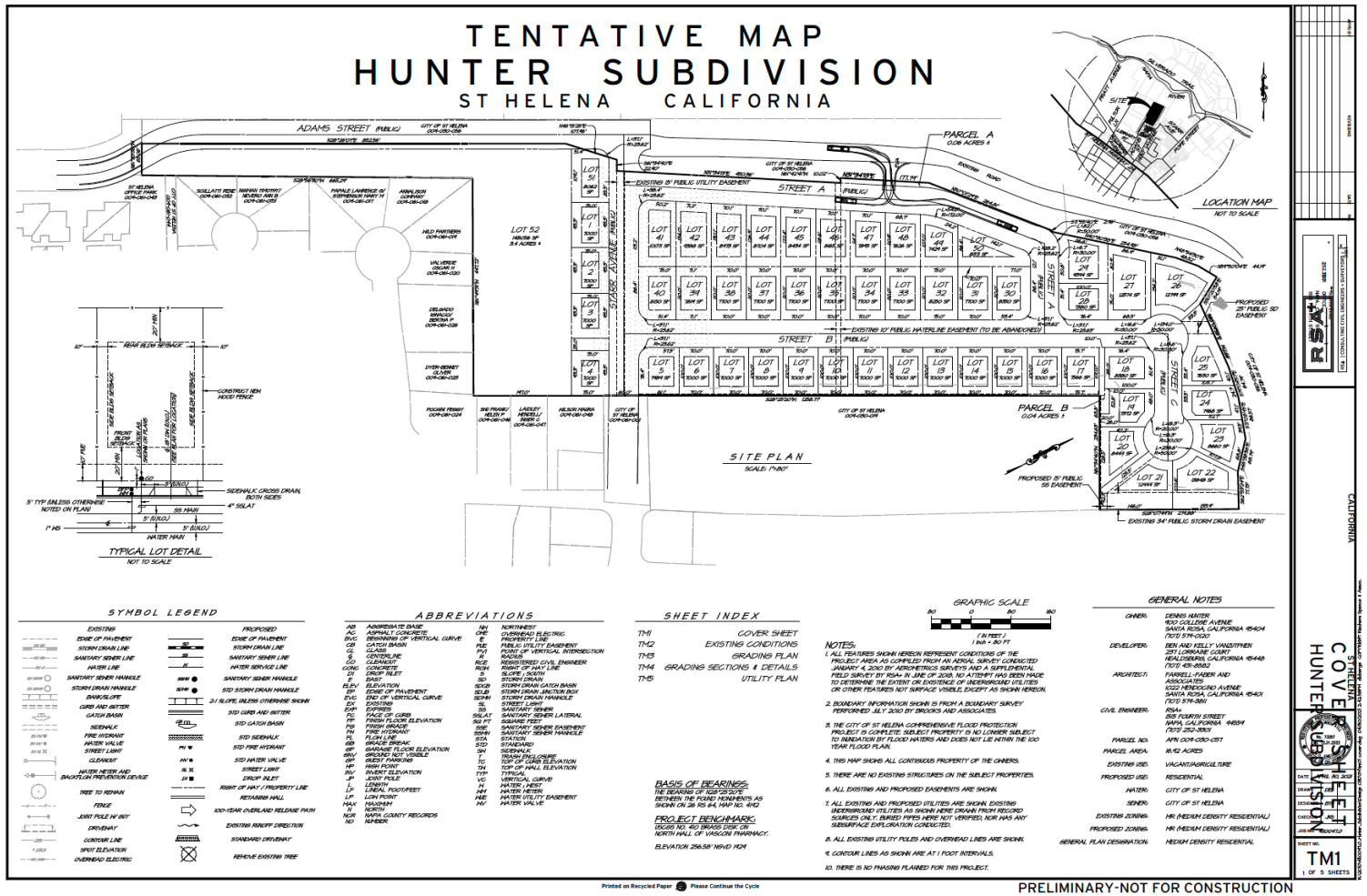
Presentation Summary

- Project Description
- Site Location and Setting
- Analysis
- Environmental Impact Report
- Issues of Concern to the Community
- Staff’s Recommendation
- Next Steps
- Question and Answer

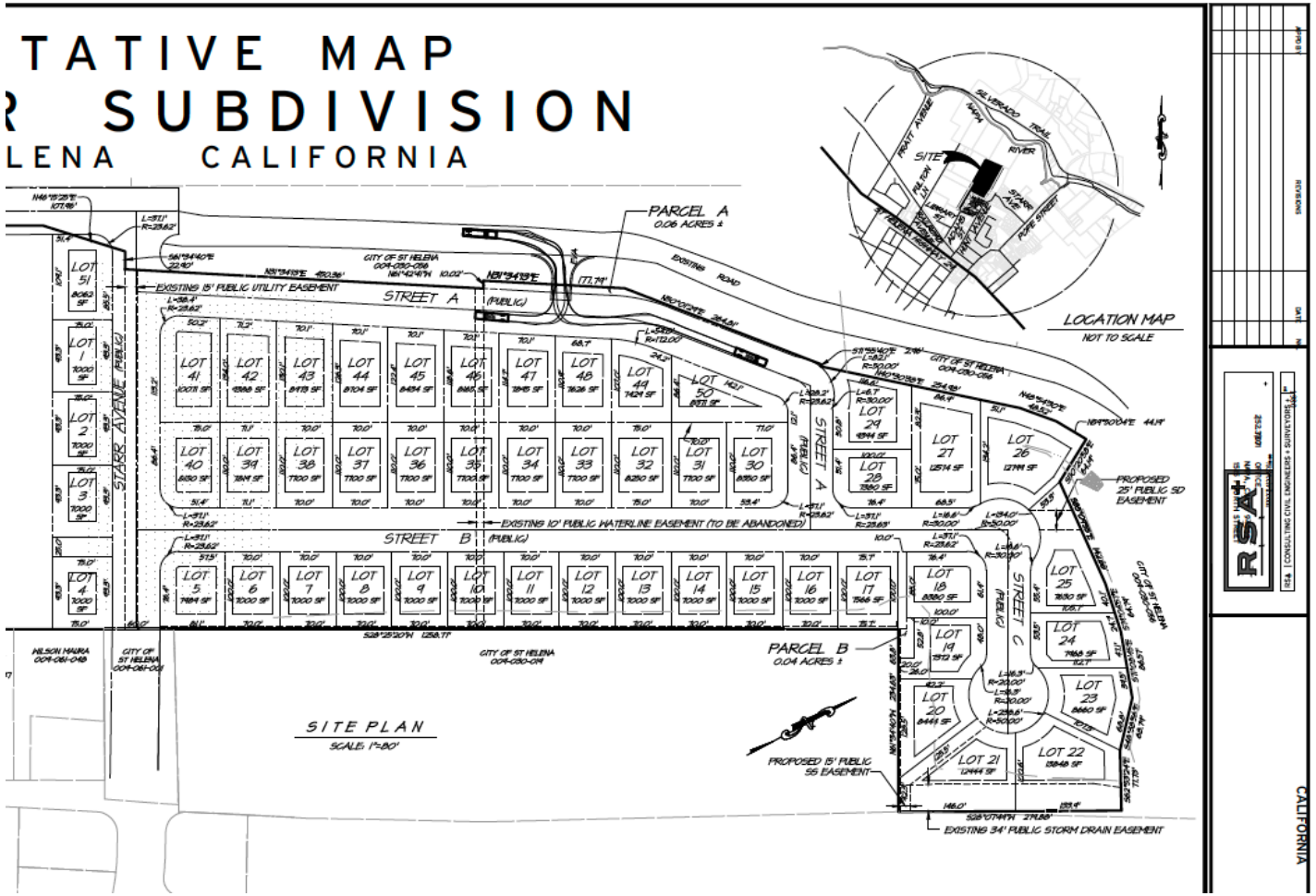
Project Description

The proposed project being considered by the Planning Commission at this time is a Tentative Subdivision Map to subdivide a 16.9-acre parcel of land in the eastern area of the city, east of the existing terminus of Adams Street. The proposed subdivision would create 51 lots for single family homes, and a separate parcel (lot 52) on which multi-family attached housing units would be built.

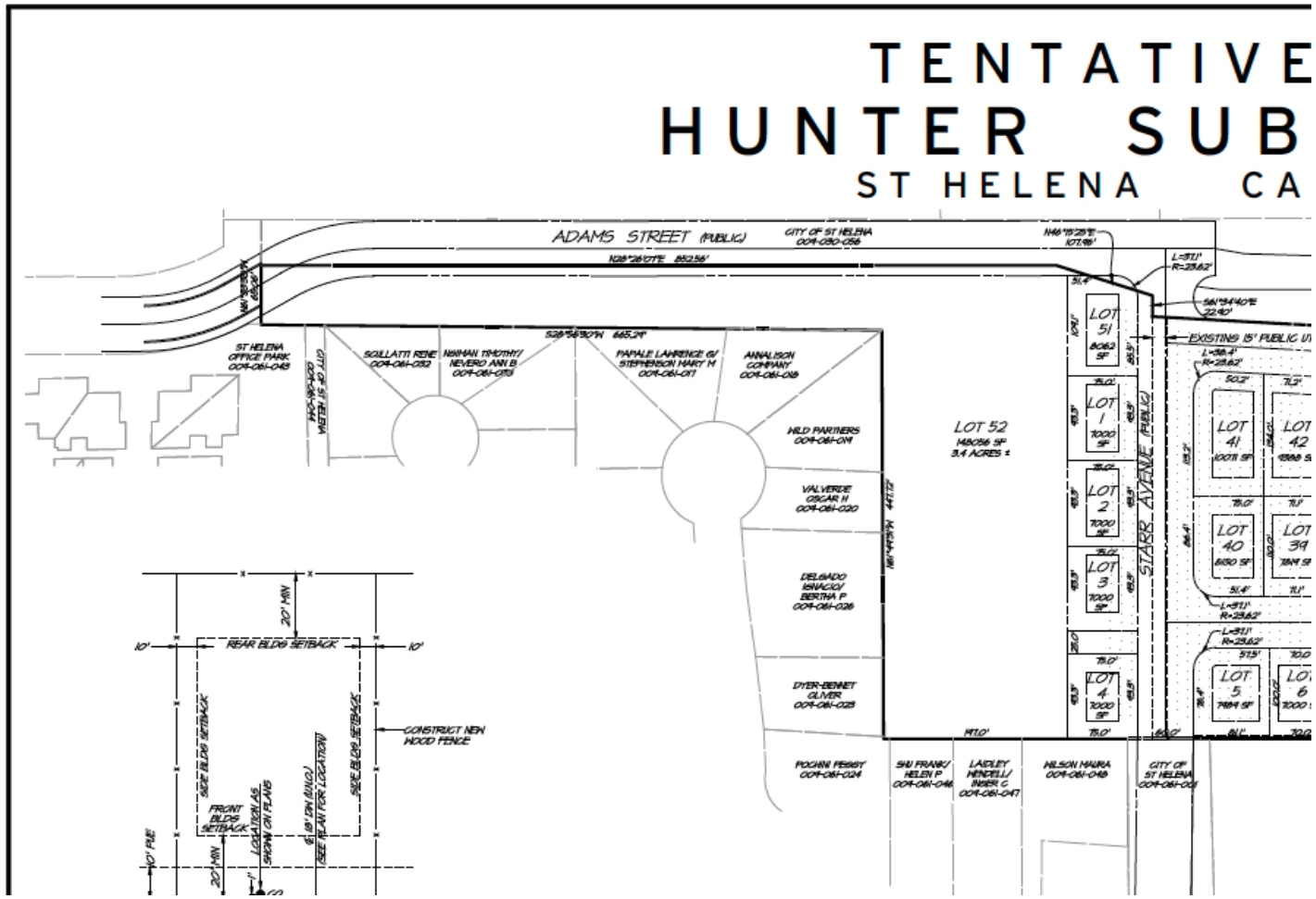
Project Description



Project Description



Project Description



Project Description

The Applicant proposes to construct a total of 87 single- and multi-family homes and accessory dwelling units:

- Single Family Homes: 51 units
- Attached Multi-Family: 25 units
- Accessory Dwelling Units: 11 units
- TOTAL: 87 units

The overall residential density of the project, including all residential types, is 5.15 units per acre (87/16.9 = 5.15).

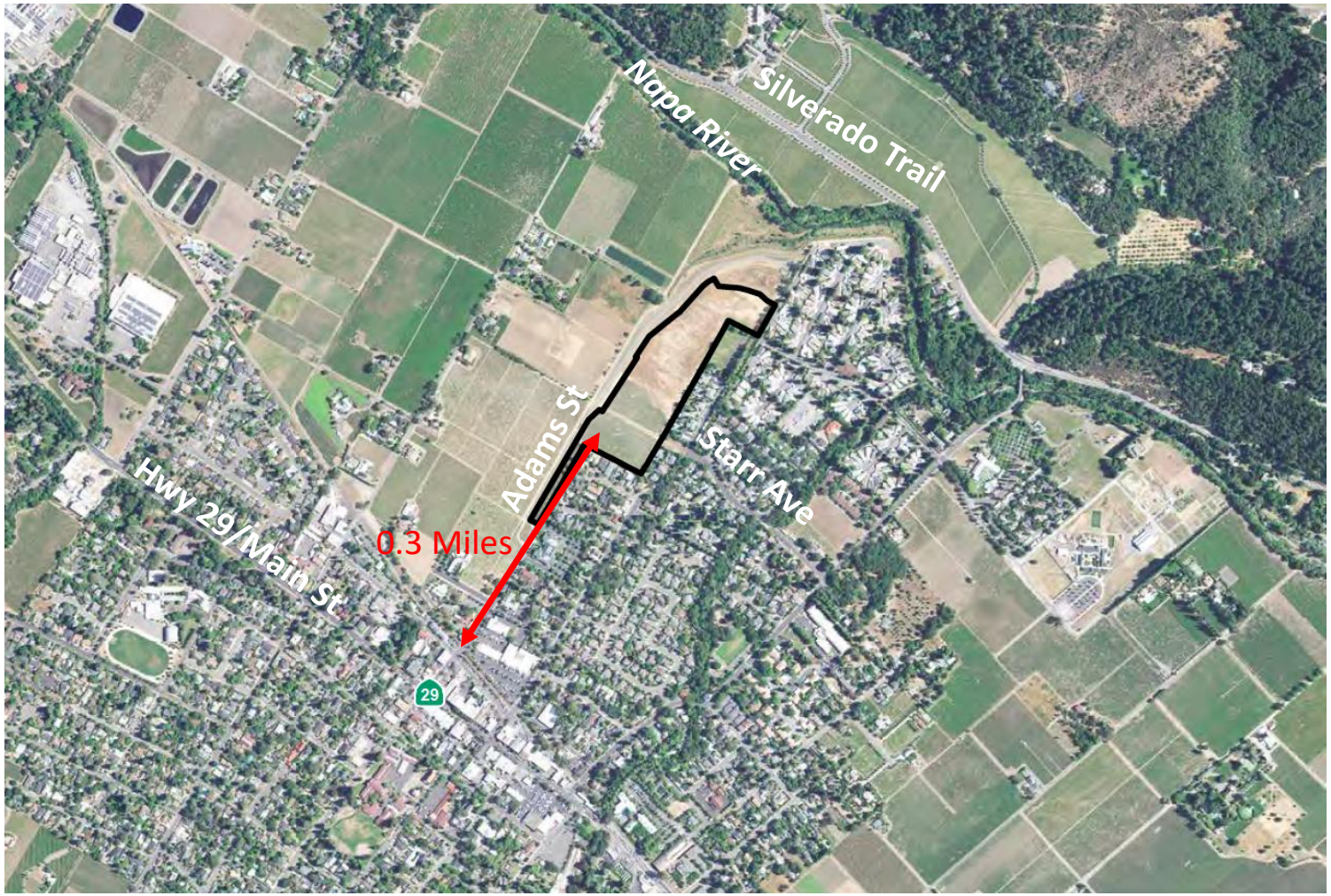
Project Description

Several future applications will be needed before the project can be developed (in addition to complying with conditions of approval):

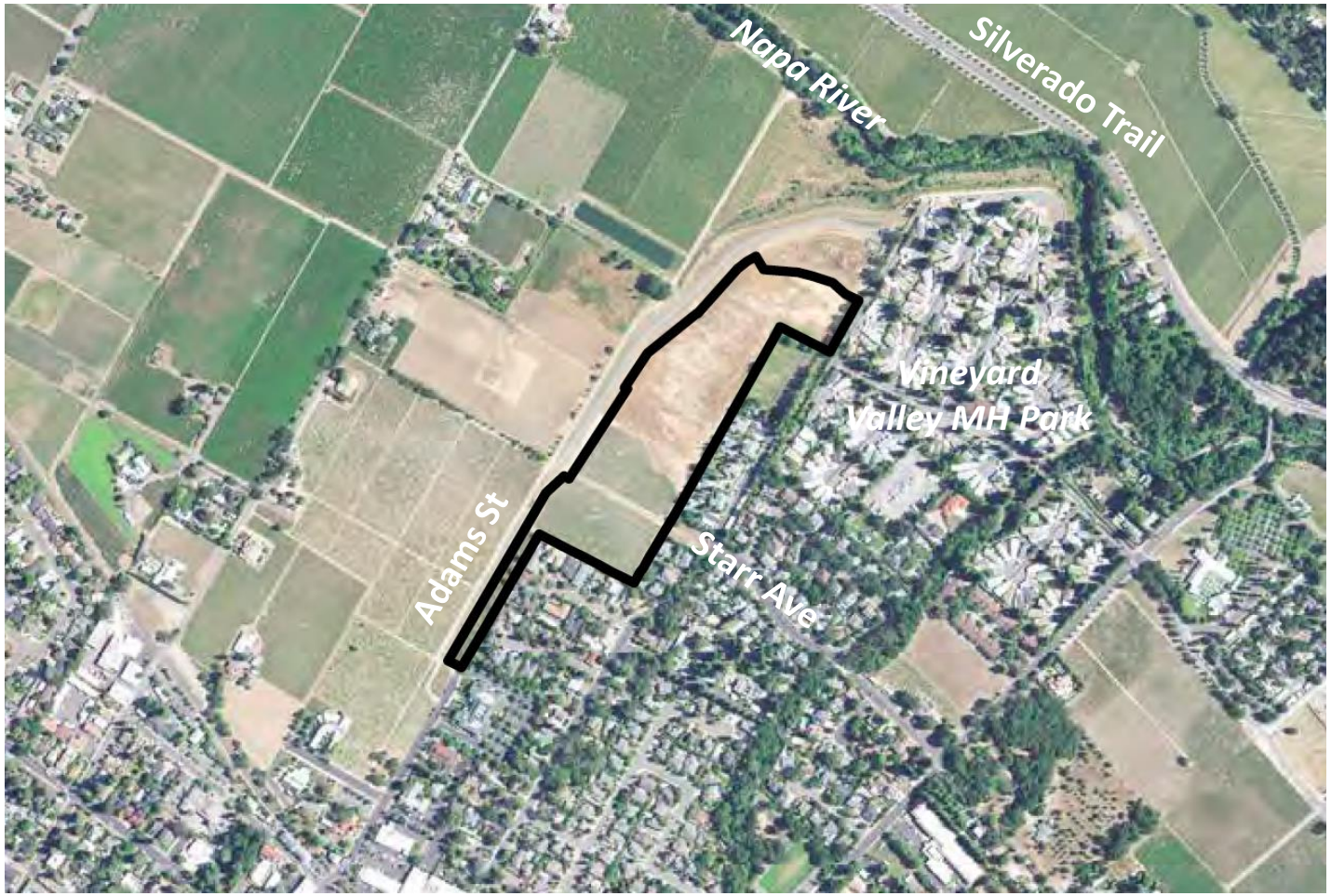
- Affordable Housing Agreement
- Design Review
- Conditional Use Permit for Multi-Family Housing

The only application before the Commission at this time is the Tentative Subdivision Map.

Project Location & Land Use

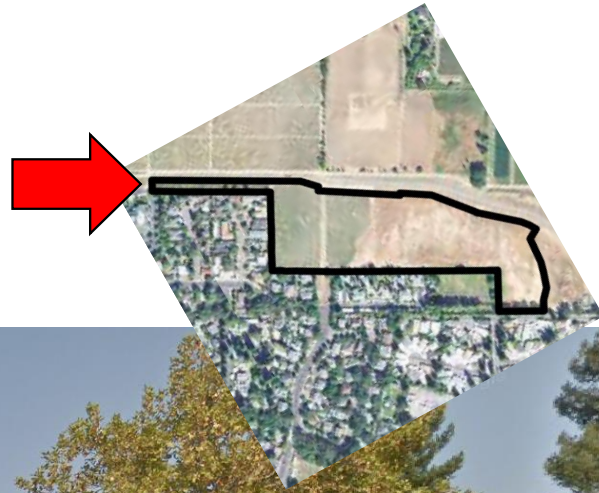


Project Location & Land Use



Site Photos

View to NorthEast

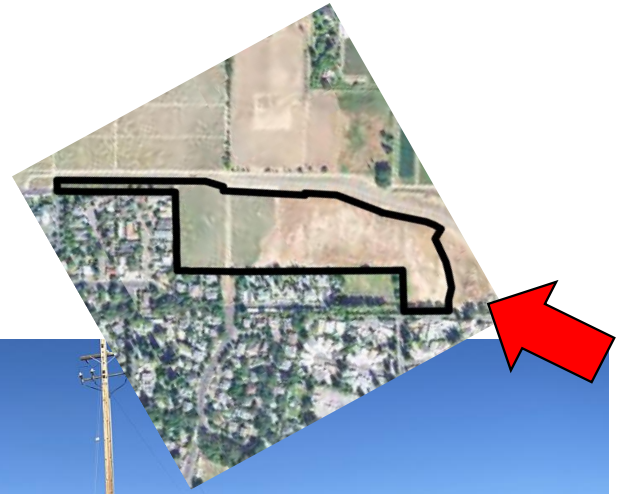


Site Photos

View to East

Site Photos

View to West

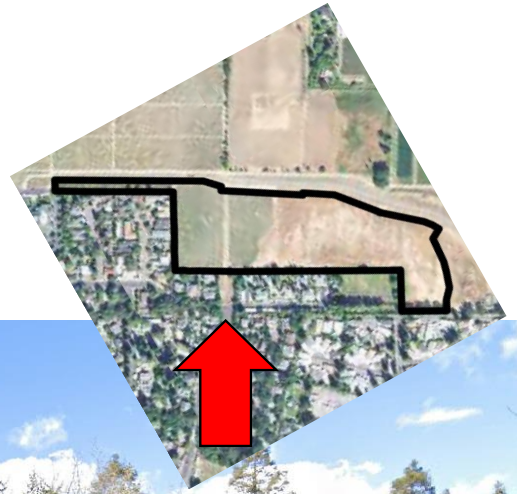


Site Photos

View to West

Site Photos

View to NorthWest



Site Photos

Analysis: Tentative Subdivision Map Findings

Planning Commission's role in tentative maps is to make a recommendation to the City Council. The City Council approves or denies tentative maps.

Section 16.16.080(A) of the SHMC defines the findings which must be made to recommend approval of a tentative map. A map can be denied *only* if facts in the record support a conclusion that these findings cannot be made.

Analysis: Tentative Subdivision Map Findings

A. In recommending approval or conditional approval or in approving or conditionally approving a tentative map, the planning commission and city council shall find:

1. That the proposed subdivision, together with the provisions for its design and improvement, is consistent with the general plan, any applicable specific plan, and other applicable provisions of this code; and

2. Except for condominium conversion projects where no new structures are added, that the design of the proposed subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in the subdivision, as described in the state Subdivision Map Act and any guidelines promulgated by the city council.

Analysis: Govt Code Limits on Denials

Also, Government Code Section 65589.5(j)(1) provides that if a housing development project complies with applicable *objective* general plan, zoning, and subdivision standards and criteria in effect at the time the application was deemed complete, the City may only deny the project if it finds, based on written findings supported by a preponderance of the evidence in the record that both of the following conditions exist:

1. The housing development project would have a specific, adverse impact upon the public health or safety unless the project is disapproved or approved upon the condition that the project be developed at a lower density. A "specific, adverse impact" means a significant, quantifiable, direct, safety standards, policies, or conditions as they existed on the date the application was deemed complete.
2. There is no feasible method to satisfactorily mitigate or avoid the adverse impact identified pursuant to paragraph (1), other than the disapproval of the housing development project or the approval of the project upon the condition that it be developed at a lower density.

Analysis: General Plan

1993 vs 2019 General Plan

Because the project application was deemed complete in 2011, the General Plan and Zoning Code at the time (including the 1993 General Plan) are used for purposes of determining General Plan consistency.

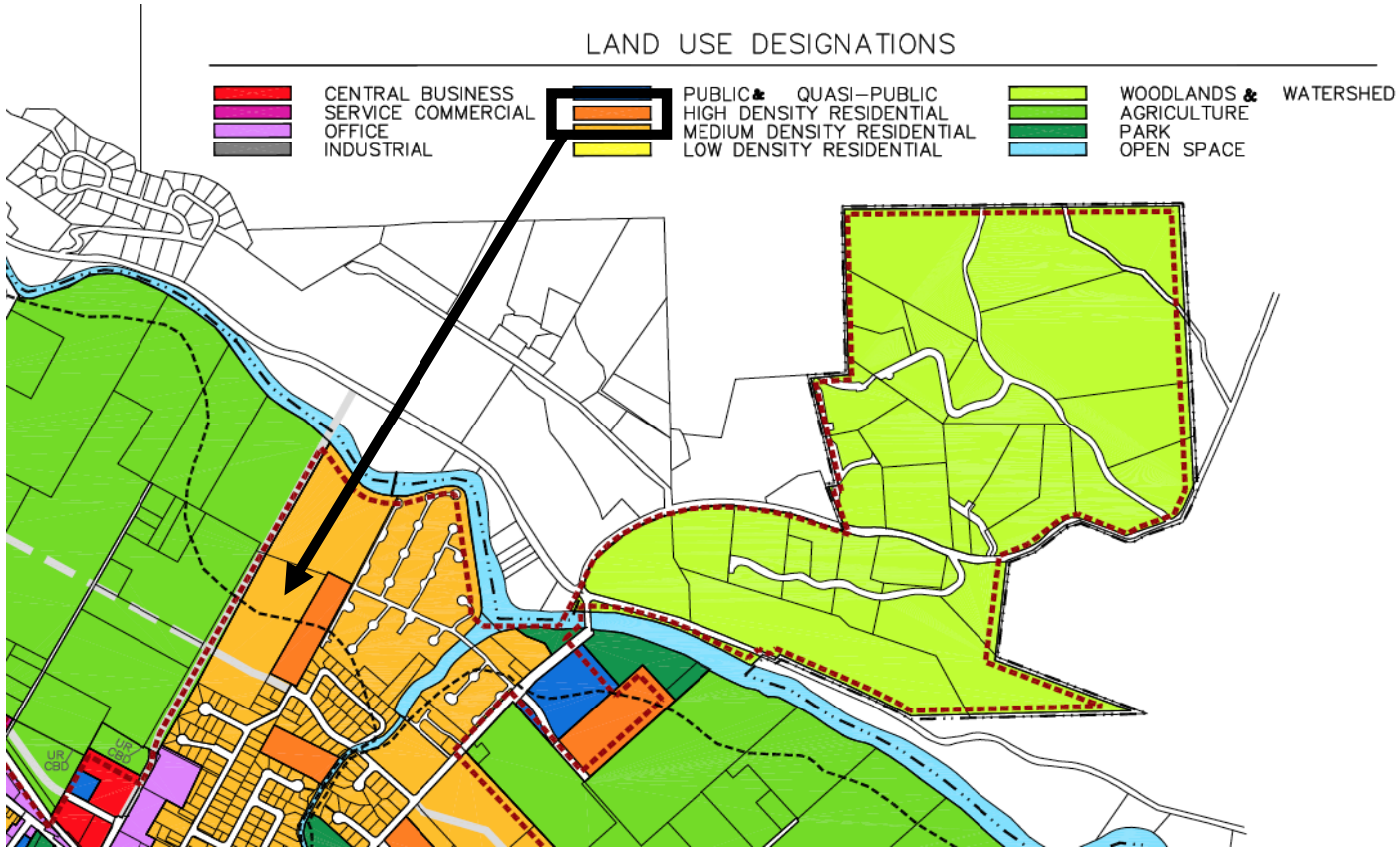
Policies in the 2019 General Plan do not apply for the purpose of determining General Plan consistency.

Analysis: General Plan

1993 General Plan

The 1993 General Plan designates the site for Medium Density Residential. *Project is Consistent with the Land Use Map.*

Separate review of 2019 General Plan policies concluded the project is also consistent.

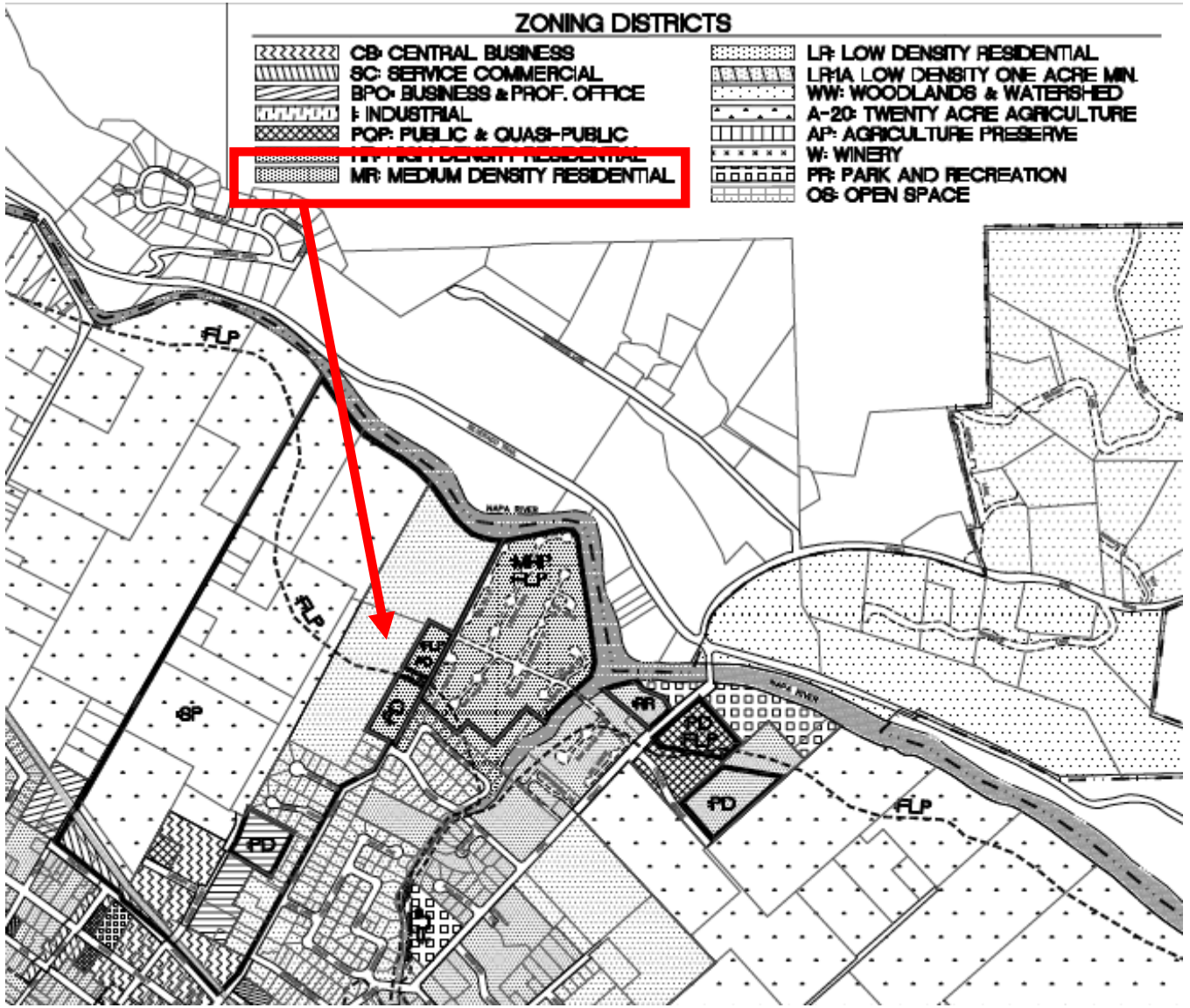


Analysis

Zoning Map

The project site was zone “MR” (Medium Density Residential) on the 2010 Zoning Map.

Project is Consistent



Analysis: Zoning

Zoning Code

Development standards for lots in the MR zoning district:

- Minimum lot area: 7,000 square feet
- Minimum lot width and frontage: 70 feet
- Minimum density: 5.1 units per acre

Based on these standards:

- All proposed residential lots1 are at least 7,000 square feet in size
- All proposed residential lots are at least 70 feet in width
- The overall density of the project, including the proposed 25 multi-family homes on Parcel 52 and the proposed 11 accessory dwelling units, is 5.15 units per acre, which meets the minimum required density.

Project is Consistent

Analysis: Heating and Cooling

Passive Heating and Cooling

- Approximately 40 of the proposed lots would allow a house oriented in an east-west configuration, allowing these homes, if properly designed, to take advantage of solar exposure.
- Approximately 40 of the proposed lots would allow for homes oriented so that, if front and rear doors and windows were opened, the prevailing upvalley breeze would provide for natural cooling.
- There is no existing shade on the property, but future homes would be required to install landscaping, including trees that would provide shade.

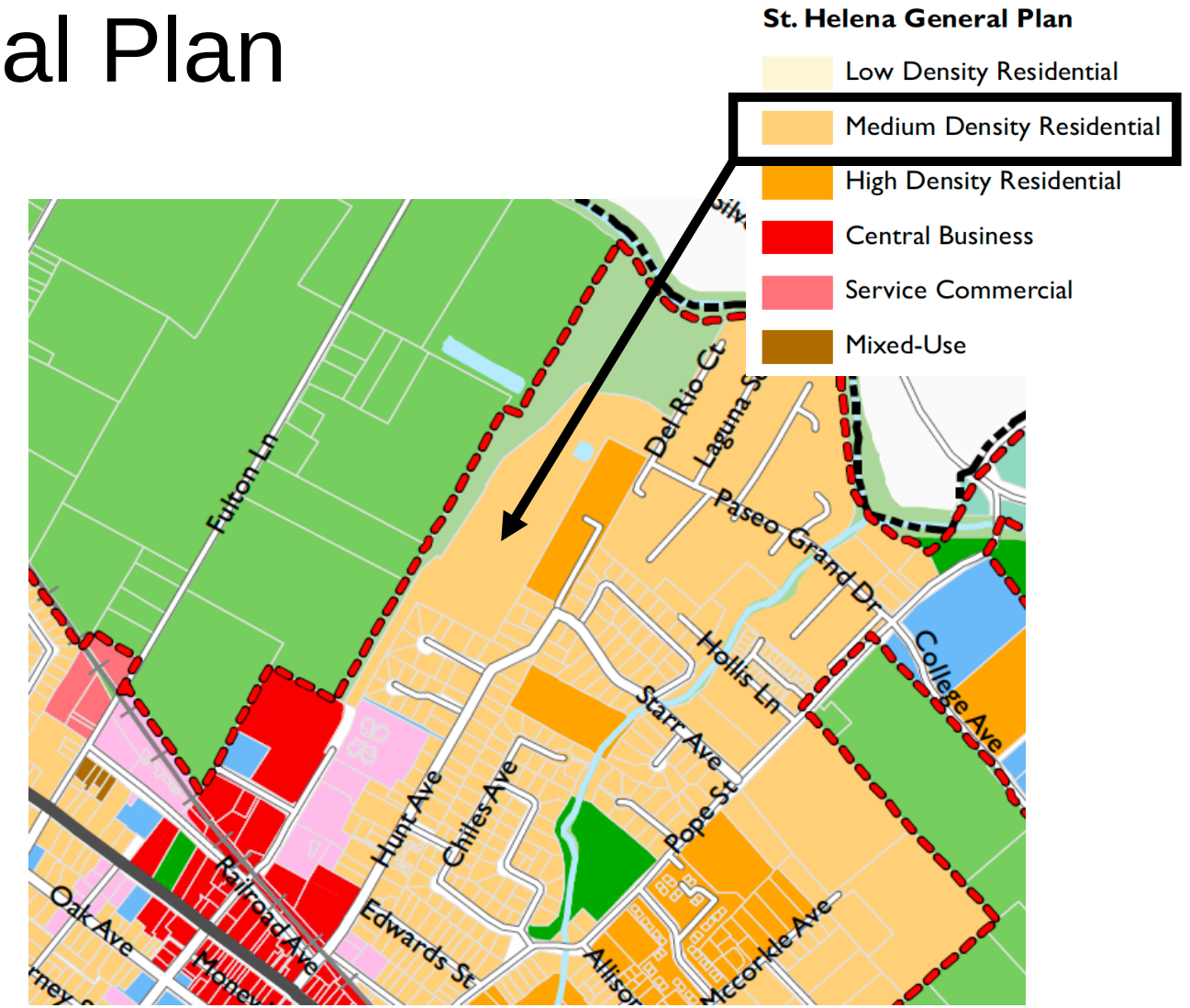
Project is Consistent.

2019 General Plan

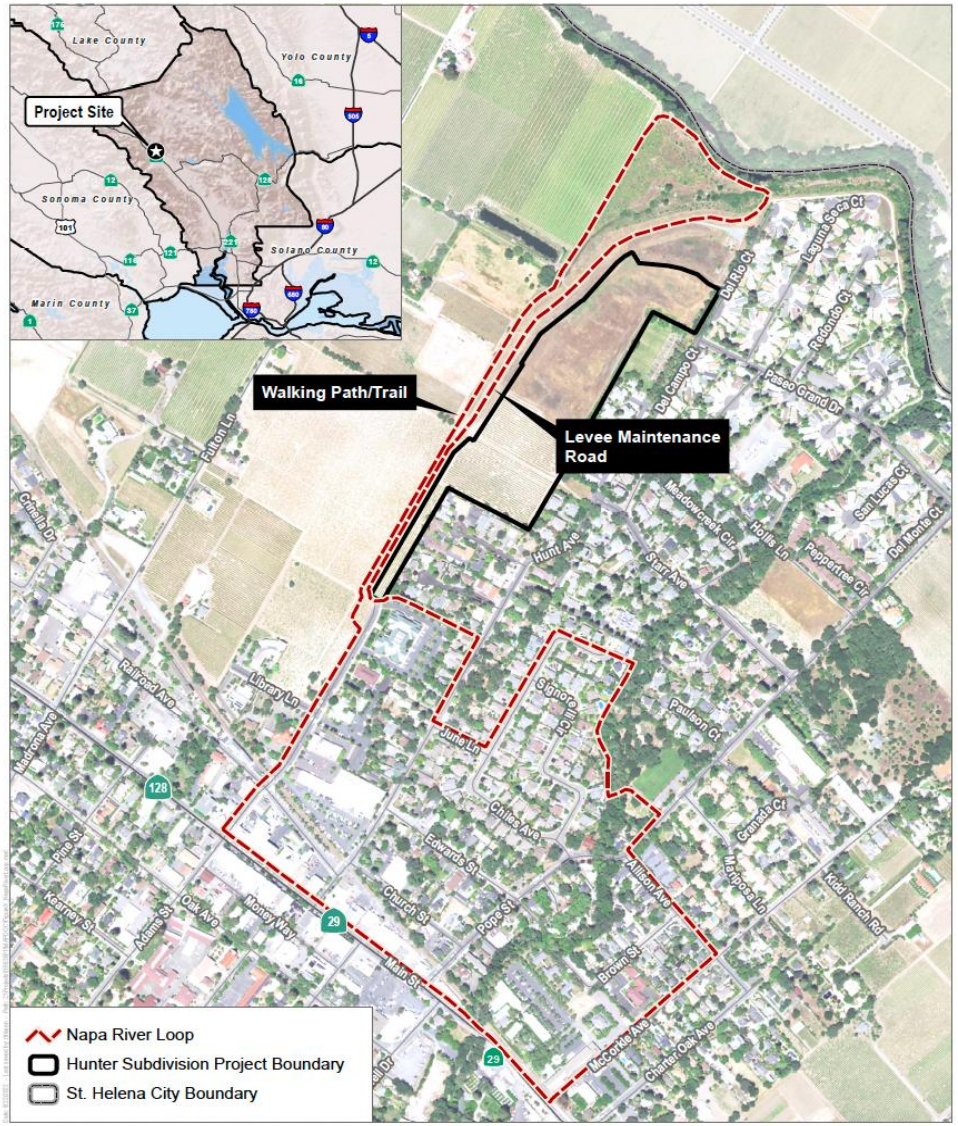
2019 General Plan

The 2019 General Plan designates the site for Medium Density Residential. *Project is Consistent with the Land Use Map.*

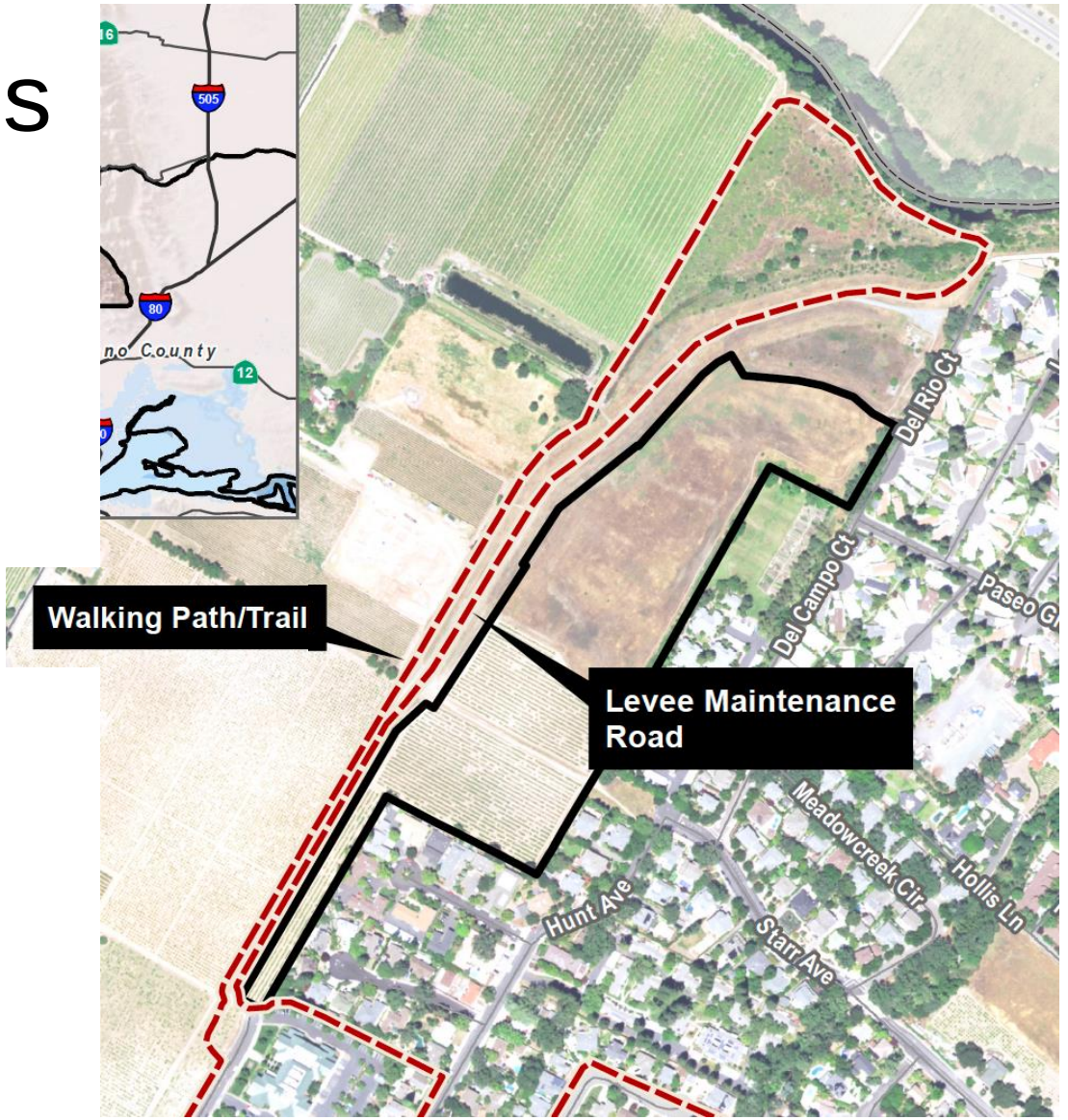
Separate review of 2019 General Plan policies concluded the project is also consistent.



Trails


Project Site
Lake County
Yolo County
Sonoma County
Solano County
Marin County
Walking Path/Trail
Levee Maintenance Road
Napa River Loop
Hunter Subdivision Project Boundary
St. Helena City Boundary

Trails


Walking Path/Trail
Levee Maintenance Road
Del Rio Ct
Del Campo Ct
Meadowcreek Cir
Hollis Ln
Hunt Ave
Starr Ave
505
80
12

Environmental Impact Report

A Draft EIR was prepared with a 45-public review period beginning on September 23, 2021 and ending on November 8, 2021.

Due to the volume of comments, the public review period was extended to November 30, 2021 for a total of 67 days.

Environmental Impact Report

- Aesthetics (Potentially Significant, but mitigation available)
- Agriculture and Forest Resources (Less than Significant)
- Air Quality (Less than Significant)
- Biological Resources (Potentially Significant, but mitigation available)
- Cultural and Tribal Resources (Potentially Significant, but mitigation available)
- Energy (Less than Significant)
- Geology and Soils (Potentially Significant, but mitigation available)
- Greenhouse Gas Emissions (Less than Significant)
- Hazards and Hazardous Materials (Potentially Significant, but mitigation available)
- Hydrology and Water Quality (Less than Significant)

Environmental Impact Report

- Land Use and Planning (Less than Significant)
- Mineral Resources (Less than Significant)
- Noise and Vibration (Potentially Significant, but mitigation available)
- Population and Housing (Less than Significant)
- Public Services (Less than Significant)
- Recreation (Less than Significant)
- **Traffic and Transportation** (Significant and Unavoidable)
- Tribal Cultural Resources (Less than Significant)
- Utilities and Service Systems (Less than Significant)
- Wildfire (Less than Significant)

Environmental Impact Report

Four alternatives examined:

- Alternative 1) No Project/No Development Alternative,
- Alternative 2) No Project/General Plan
- Alternative 3) Park/Open Space Preserve Alternative
- Alternative 4) Increased Density/Affordable Housing Alternative

Environmental Impact Report

Based on the analysis in the Draft EIR, Alternative 1, the No Project Alternative, would result in the fewest environmental impacts, and is the "environmentally superior alternative." Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Of the other alternatives evaluated, Alternative 3, the Park/Open Space Preserve alternative is the environmentally superior alternative. However, according to the Draft EIR, "... this alternative would not avoid all of the significant impacts associated with the Project and all of the identified mitigation would still be required."

Environmental Impact Report

A **Statement of Overriding Considerations** has been prepared which provides the following reasons why approving the project is appropriate:

1. The Project provides needed housing to the City, particularly affordable housing.
2. The City, per the adopted 2015 Housing Element, has a jobs to housing ratio above the County average, indicating a need for additional housing. As of the most recent Housing Element Progress Report (April 2022), the City had not met its regional housing needs allocation for very-low or moderate income housing.
3. The Project would implement the City's General Plan. The Project site is identified as a housing site in the City's current General Plan, the current Housing Element, and the previous two iterations of the City's General Plan.
4. The significant and unavoidable impact is related to VMT. Ultimately VMT per capita will be reduced by providing necessary housing in jurisdictions with a high number of jobs. As stated previously, the City of St. Helena currently has a jobs housing imbalance which the Project will help address.
5. The Project will pay development fees which will assist in needed infrastructure improvements in the City, including wastewater treatment and collection systems.
6. The Project would construct the extension of Starr Avenue and the partial extension of Adams Street consistent with the General Plan Circulation Element.

Environmental Impact Report

A total of 121 Draft EIR comment letters were received. Responses to Comments were prepared and included in the Final EIR. Topics included:

- Concern about the capacity of downstream sewer lines to accommodate additional flows generated by the project.
- Concern about the “high density” of the proposed project.
- Concern about the loss of open space and the ability to walk on informal trails located on the project site.
- Concern about projected water use and the ability of the project to feasibly comply with the City’s water neutrality requirement.
- Concern about future traffic congestion and traffic safety impacts (including for children walking to school).

Environmental Impact Report

(EIR Comments Continued)

- Concern about the project's impact on the ability of residents in the Vineyard Valley mobilehome community to evacuate in the event of an emergency.
- Concern about the ability of the City-constructed levee on the Napa River (built to protect the Vineyard Valley mobilehome community from flooding) to protect new homes in the proposed project.
- Concerns about changes to the appearance of the project site when existing open space and vines are replaced with a suburban neighborhood.
- Concerns about the project's effect on the City's plans to construct a new roadway connection to the Silverado Trail.

Responses to all of the comments received during the public review period are included in the Final EIR and Responses to Comments, Attachment 7 to this staff report.

Environmental Impact Report

All comments are responded to in the Final EIR. “Master responses” were written to address frequently expressed comments:

- Emergency evacuation
- Water Neutrality
- Flood protection and Napa River levee
- Wastewater conveyance

Individual responses to other comments.

Issues of Concern

Based on public input and prior review of the project, the following are issues of concern to the public. These are not necessarily related to the findings of approval for the tentative map.

- Water Neutrality
- Trail/Open Space
- Levee/Flooding
- Parking
- Aesthetics
- Sewer Capacity
- “High Density” Nature of the Project
- Traffic/Congestion
- Intersection Design Adams Street/Starr Avenue and Starr Avenue/Street A
- Vacation of City Property

Water Neutrality

The project is required to comply with the City's water neutrality ordinance, which requires that new development offsets its use of City water. The project will offset its use by:

- Using an existing on-site water well for outdoor irrigation and other uses (approx. 17 acre-feet/year savings)
- Constructing other improvements as specified in the proposed conditions of approval.
- All improvements must be in place before final map can be recorded.
- *Retrofitting of toilets or other fixtures in existing homes is not proposed.*

Staff Recommendation

Staff recommends that the Planning Commission:

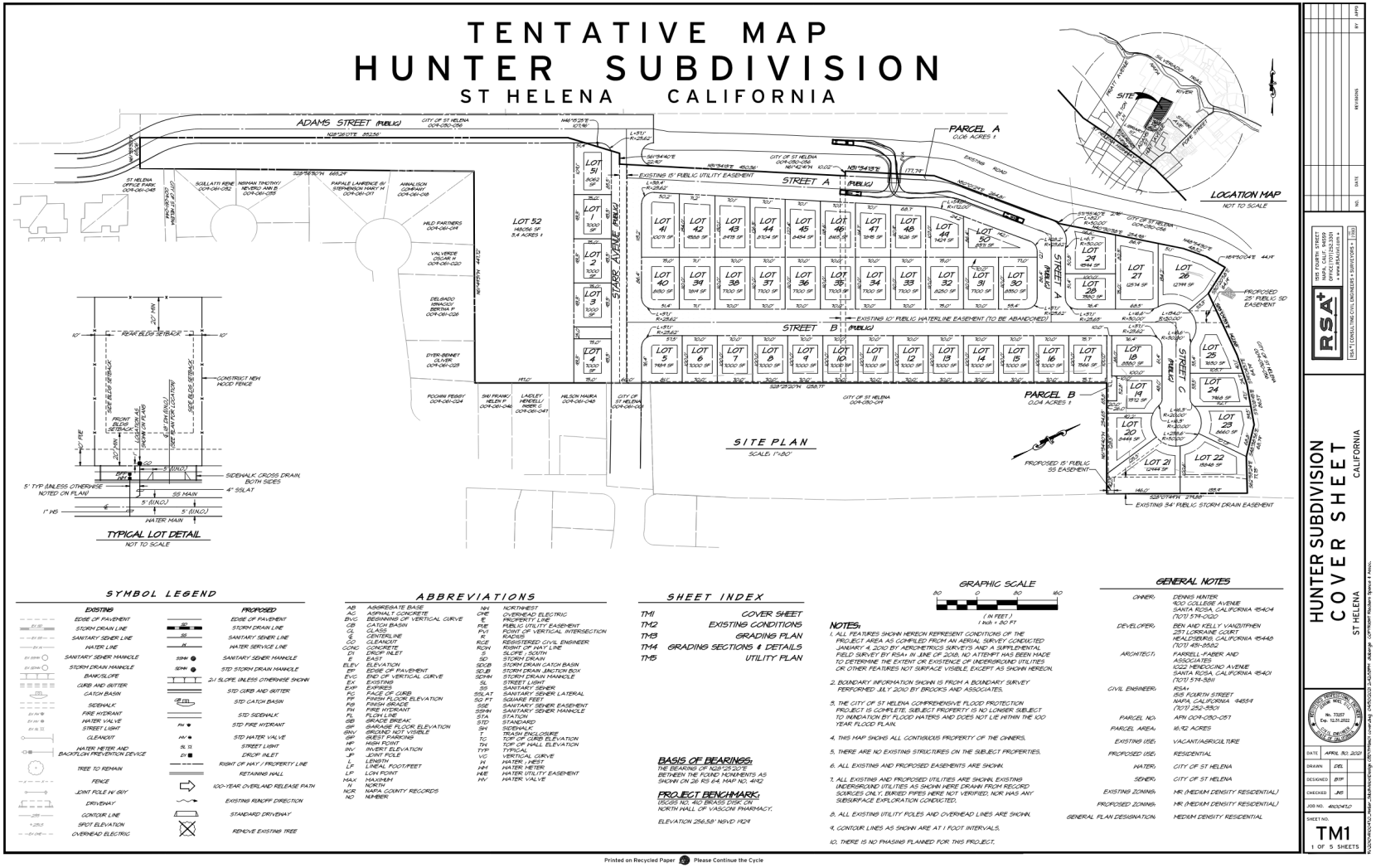
1. Recommend that the City Council adopt a Resolution recommending certification of the Final EIR, approval of the Mitigation Monitoring Program, Findings of Fact and Statement of Overriding Considerations; and
2. Recommend that the City Council adopt a Resolution recommending approval the requested Tentative Map No. 2022-001, File #PL10-040 for the Hunter Subdivision project.

Separate Resolutions have been prepared for these recommendations.

Next Steps

- City Attorney briefing on Housing Crisis Act (2018)
- Tonight is **not** the final hearing for this application
- City Council is the final decision-making body for the EIR certification and the Tentative Map approval or denial

Questions?



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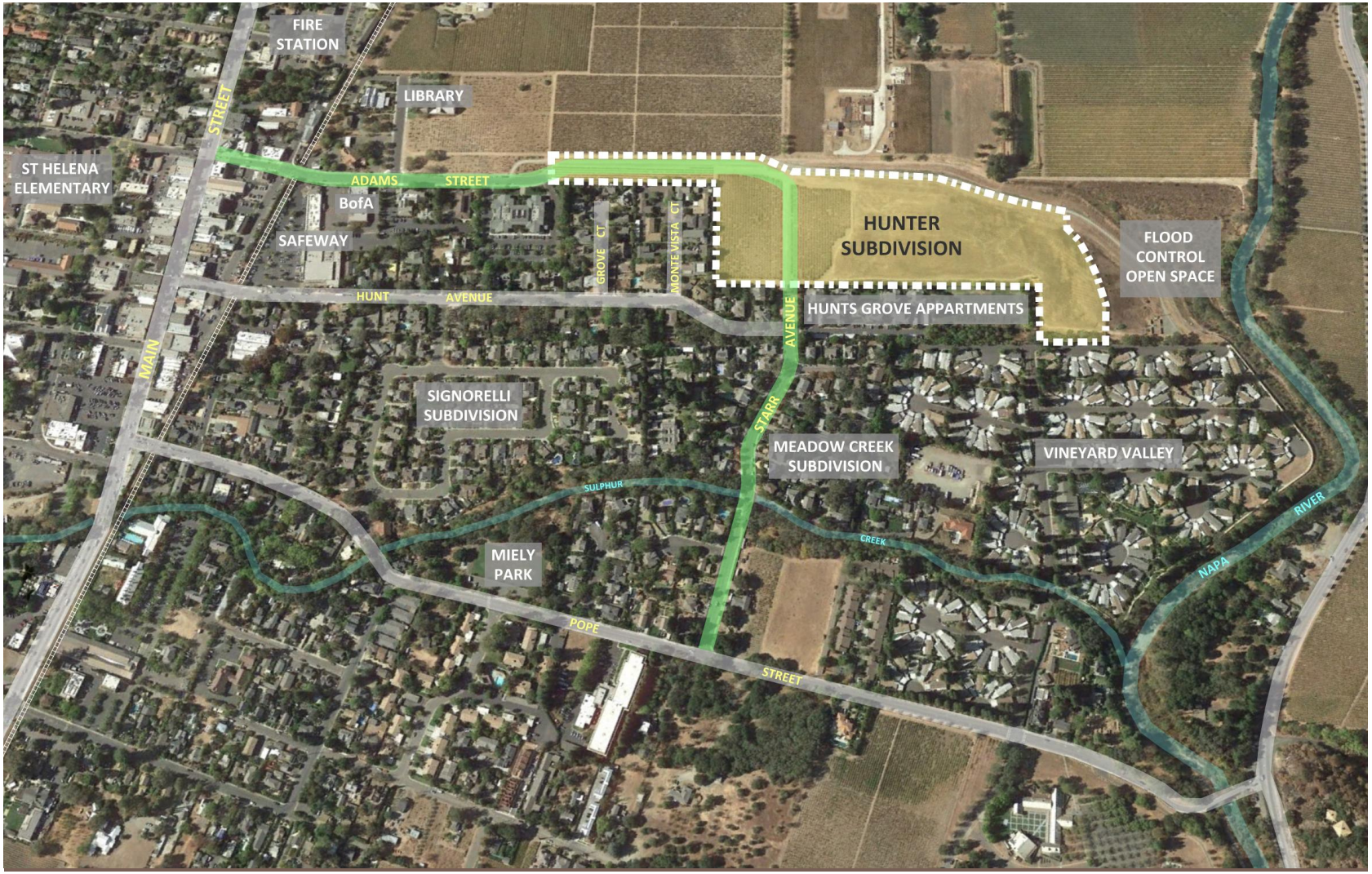
Site Plan

Hunter Subdivision Project



Aerial Map

Hunter Subdivision Project

Project Objectives

- Subdivide the site to accommodate residential development at a density of 5.1 units per acre – the lowest density allowable via the Medium Density Residential District.
- Provide a variety of housing types, including multi-family, single- family and accessory dwelling units.
- Provide housing at a range of incomes including very low, low and moderate income households.
- Provide opportunities for the city to implement key Housing Element goals.
- Provide opportunities for the city to accommodate its RHNA requirements.
- Minimize traffic related impacts by providing more local housing opportunities.
- Improve alternative transportation amenities including pedestrian and bicycle links including a connection to the Napa Valley Vine Trail.

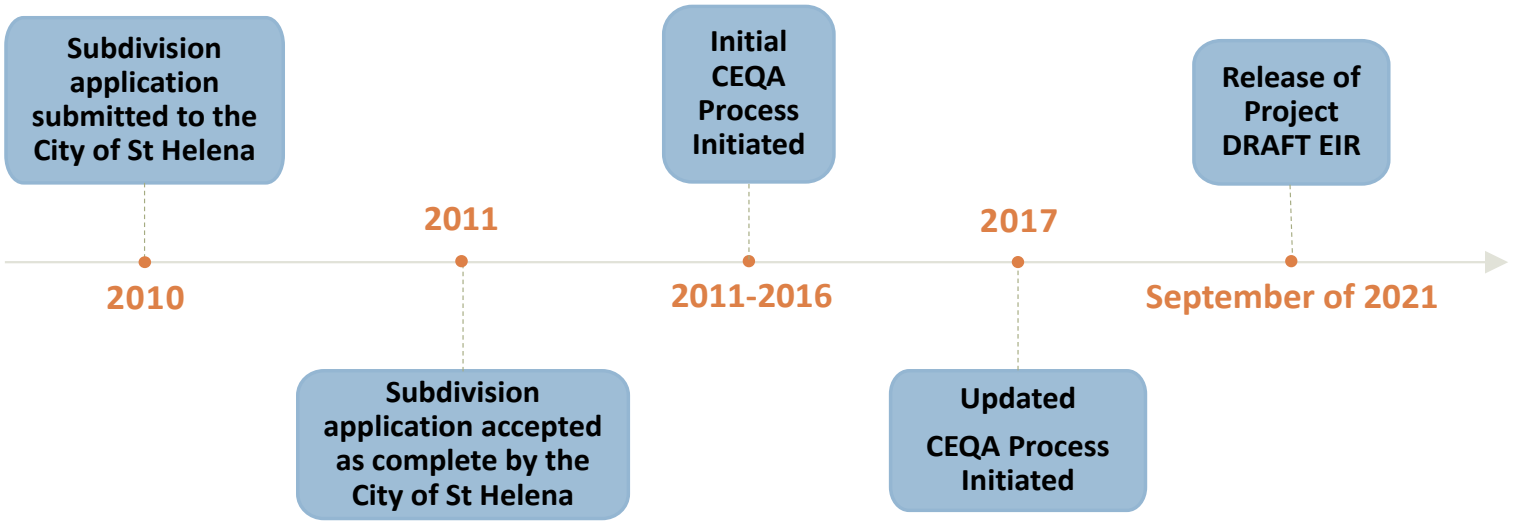
Project Description

The project includes a request to approve a Tentative Map to subdivide the 16.9-acre parcel into 51 single-family lots and one 3.4-acre parcel (Lot 52). The 51 single-family lots would range in size from 7,000 to 8,000 square feet, with some larger corner and cul-de-sac lots. In order to meet the minimum density requirements for the site, at least 87 dwelling units must be built as a part of the project.

The project will include 87 dwellings consisting of the following:

- 51 Market-rate single-family dwellings.
- 11 ADUs on 11 of the single-family lots (not income restricted).
- 25 Multi-family, affordable units proposed on Lot 52.
- All units will be built concurrently – no phasing.

Project Timeline



Project Character Concepts

Character

Hunter Subdivision Project

Project Exhibits – Master Plan

Community Goals

The Project will Provide:

Housing for a Variety of Incomes

- Variety of Housing Types
- 11 ADUs
- Compact Efficient Design

A Walkable & Bikeable Community

- Walkable Community Centered Around Physical Activity
- Access to Regional Trail Systems
- Adjacent to Transit

A Water Neutral Community

- Providing a High Volume Well
- Low Water Use Design
- Storm Water Infiltration and Groundwater Recharge

Applicant's Presentation

Hunter Subdivision Project

Community Goals

The Project will Provide:

A Safe Community

- Eyes on the Neighborhood
- Safer Public Lands
- Attractive 'Low Fuel' Public Landscape
- Complement The Surrounding Area

A Sustainable Community

- Future Homes Will Feature Sustainable Design
- Reduction of CO2 to support the City's Climate Action Directives
- Encourage Sustainable Lifestyles

A Vibrant Community

- Strong Sense of Place
- Saint Helena Design and Agricultural Connections
- Attractive 'Low Fuel' Public Landscape
- A Pedestrian Scale Community

Applicant's Presentation

Hunter Subdivision Project

PLANNING COMMISSION REPORT

Planning Commission Meeting of November 1, 2022

FILE NUMBER: PL22-036

SUBJECT: Request by Vanguard Properties, Inc. for a Planning Commission Sign Permit approval in order to approve two identification banners on the property located at 1345 Railroad Avenue in the Central Business (CB) zoning district.

PREPARED BY: Xinia Gamero, Permit Technician III

REVIEWED BY: Maya DeRosa, Community Development Director

APPROVED BY: Maya DeRosa, Community Development Director

LOCATION OF PROPERTY: 1345 Railroad Ave.

APN: 009-212-005

GENERAL PLAN/ZONING: CB: Central Business

APPLICANT: Vanguard Properties, Inc. / Patricia Rollins

PHONE: 415-321-7027

PROJECT DESCRIPTION

The applicant is requesting Planning Commission sign permit approval to install two (2) double-sided identification banners on the primary frontage of the building located at 1345 Railroad Ave. The proposed double-sided banners each measure approximately 19-sf (8'-4" X 2'-3") and will be constructed of a dark navy canvas fabric with white lettering and the Vanguard Properties logo. There will be four banner support poles (two per banner) that will be bolted and attached to the exterior of the building. No illumination is proposed for this signage.

ANALYSIS

CEQA

This project is exempt from the requirements of CEQA pursuant to Section 15311, Class 11(a) of the CEQA Guidelines which exempts on-premise business signs. The proposed project is not subject to any of the exceptions to the use of a categorical exemption as outlined in CEQA Section 15300.2. The project site is not located on or near an environmentally sensitive area, is not visible from a scenic highway, is not included on a hazardous waste site, and will not impact historic resources or otherwise generate or contribute to any potentially significant impacts.

GENERAL PLAN

The subject property has a General Plan land use designation of Central Business (CB).The CB land use designation includes retail and commercial uses that serve local residents and the surrounding areas. The CB district extends from Sulphur Creek along Main Street to midway between Adams Street and Pine Street, west of Oak Avenue and along the north side of Adams Street east of Main Street. General Plan Update 2040 policy applicable to the proposed project include:

- **CD2.D-**Require businesses and structures to be of a scale commensurate with existing older buildings in the CB and SC land use areas.

Staff Response: Staff finds that the proposed identification banners are consistent with the General Plan in that it promotes additional commercial activity and opportunity in the City's Central Business district.

ZONING

PLANNING COMMISSION SIGN PERMIT:

The project site is zoned Central Business (CB). Typical CB uses include offices, restaurants, specialty retail and lodging, with particular emphasis on pedestrian-oriented retail and service uses on the ground floor level and offices located on upper floors. Signs are regulated by St. Helena Municipal Code (SHMC) Section 17.148. Planning Commission approval must be obtained for all signs not permitted with an administrative sign permit as described in SHMC Section 17.148.040. The purpose of the Planning Commission sign permit is to allow the consideration of illuminated signs, signs that are larger, or signs in addition to those permitted with an administrative sign permit. The planning commission shall consider the compatibility of the sign to the site, the appropriateness of the materials and colors in relation to the project, the compatibility of the sign to the small town character of St. Helena, and the impact the sign may have on surrounding properties. The commission shall not approve signs which obscure or detract from the architecture of a historic building or structure.

Staff Response: Although the stone building at 1345 Railroad Avenue is on the City's Historic Resource Master List, staff determined that the proposed signage is compatible with the site, size appropriate to the building and its surroundings and does not detract from the architecture of the historic structure. The proposed signage associated with this application is in compliance with the restrictions and prohibitions detailed in SHMC Section 17.148. Additionally, the signs will not impede, obstruct or create hazards with respect to pedestrian traffic as the lowest portion of the banners will hang 10' feet above

the ground surface, meeting the minimum height requirement of 7'6" feet per St. Helena Municipal Code Section 17.148.110(C).

ISSUES

Staff has not identified additional issues related to this application that require additional discussion.

CORRESPONDENCE

As of the completion of this report, staff has not received correspondence related to this application.

STAFF RECOMMENDATION

For the reasons described above, staff recommends that the Planning Commission:

1. Determine that the project is exempt from the requirements of CEQA pursuant to Section 15311 of the CEQA Guidelines; and
2. Approve the application for a Planning Commission sign permit at 1345 Railroad Avenue permitting the signage described in this report in the compliance with the attached resolution.

ATTACHMENTS

PC2022-0XX 1345 RAILROAD AVE_SIGN PERMIT_RESOLUTION
Sign Plans Revised_9.26.22
Written Statement Revised_9.26.22
Photo Sample
Photo 2

CITY OF ST. HELENA PLANNING COMMISSION

RESOLUTION NO. PC2022-0XX

GRANTING PLANNING COMMISSION SIGN PERMIT APPROVAL TO 1345 RAILROAD AVE. (PL22-026)

PROPERTY OWNER: 1345 Railroad Ave, LLC. **APN:** 009-212-001

RECITALS

1. The applicant submitted an application for a sign permit on July 7, 2022 in order to place new signage on the existing commercial building located at 1345 Railroad Avenue in the Central Business (CB) zoning district;
2. The applicant proposes to install two (2) double-sided identification banners on the primary frontage of the building. The proposed banners will each measure approximately 19 square-feet and will be constructed of a dark navy canvas fabric with white lettering and the Vanguard Properties logo; and
3. The Planning Commission of the City of St. Helena, State of California, considered the sign, staff report, and all testimony, written and spoken, at a hearing on November 1, 2022; and
4. Now, therefore let it be found that, the Planning Commission approves the sign permit and thereby authorizes the modifications contained in said plans attached as Exhibit A to this resolution based on the findings below and subject to the conditions of approval enumerated herein.

RESOLUTION

A. In making the findings in this Resolution, the Planning Commission relied upon and hereby incorporates by reference all of the documents referenced in this Resolution and the associated staff reports, City files for this matter, correspondence, presentations and other materials.

B. The Planning Commission hereby finds that this project is exempt from the requirements of CEQA pursuant to CEQA Guidelines Section 15311, Class 11 (a), which exempts installation of on-premise signs.

C. The Sign Permit for the above described is granted subject to compliance with the following conditions. The conditions noted below are particularly pertinent to this permit and shall not be construed to permit violation of other laws and policies not so listed:

1. The permit shall be in conformance with all City ordinances, rules, regulations and policies in effect at the time of issuance of a building permit.

2. This permit shall be vested within one (1) year from the date of approval. However, the permit may be extended for up to two (2) one-year periods pursuant to the St. Helena Municipal Code, Section 17.08.130, Extension of Permits and Approvals. Any request for an extension of the Sign Permit must be justified in writing and received by the Planning Department at least thirty (30) days prior to expiration.
3. This permit will expire if the use is discontinued pursuant to existing ordinances and regulations.
4. In any action or proceeding to attack, challenge, invalidate, set aside, void or annul the City's approval of applicant's Project, in whole or in part, applicant shall defend, at its own expense and without any cost to the City, and with counsel acceptable to the City, and shall fully and completely indemnify and hold the City, its agents, officers, and employees harmless from and against any and all claims, causes of action, damages, costs, attorney's fees and liability of any kind, so long as the City reasonably promptly notifies the applicant of any such claim, action, or proceedings and the City cooperates fully in the defense of the action or proceedings.
5. This sign permit shall run with the land and shall be binding upon all parties having any right, title or interest in the real property or any part thereof, their heirs, successors and assigns, and shall inure to their benefit and benefit of the City of St. Helena.
6. All signs must be maintained by the property owner, tenant, or permittee. In event a sign becomes derelict for reasons of lack maintenance the approval may be revoked and the sign subject abatement. The sign shall be removed by the property owner within thirty (30) days abandonment or termination of use pursuant to the St. Helena Municipal Code, Section 17.148.110.
7. The signs authorized by this sign permit shall conform to the details and dimensions shown on the Exhibits which were reviewed and approved by the Planning Commission at their November 1, 2022 meeting. The approved identification banners measure approximately 19 square feet each.
8. A building permit shall be obtained by the applicant prior to installation of the approved signage.
9. No internal illumination of signs is permitted. Internally illuminated means a sign which is illuminated from a lighting source within the internal structure of the sign which illuminates the entire face of the sign (does not include neon signs or halo illuminated signs).
10. An Encroachment Permit shall be obtained by the applicant prior to installation of the signs if work involves locating of any person or structure on public property, such as a sidewalk, driveway, or street, if necessary.
11. Provided they are in general compliance with the Sign Ordinance, minor modifications may be approved by the Community Development Director.

I HEREBY CERTIFY that the foregoing sign permit was duly and regularly approved by the Planning Commission of the City of St. Helena at a regular meeting of said Planning Commission held on November 1, 2022 by the following roll call vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

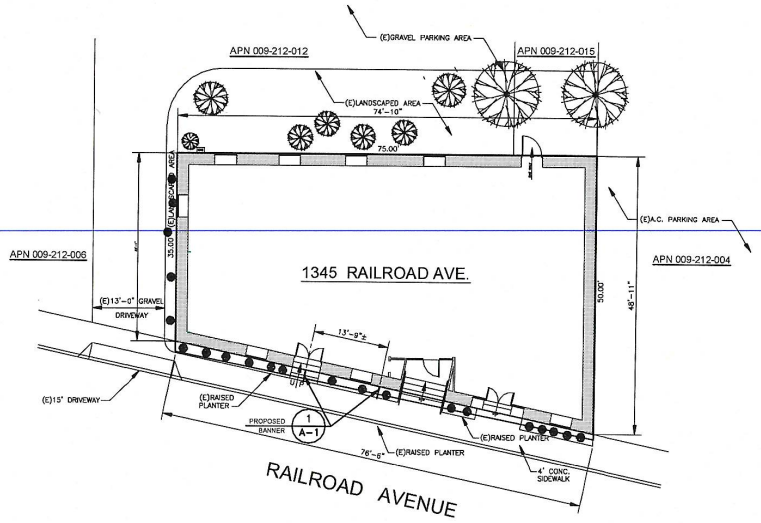
APPROVED:

_____
John Ponte
Chair, Planning Commission

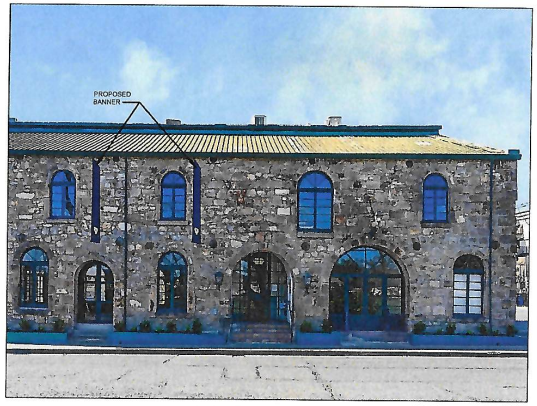
ATTEST:

_____
Maya DeRosa, AICP
Community Development Director

EXHIBIT A

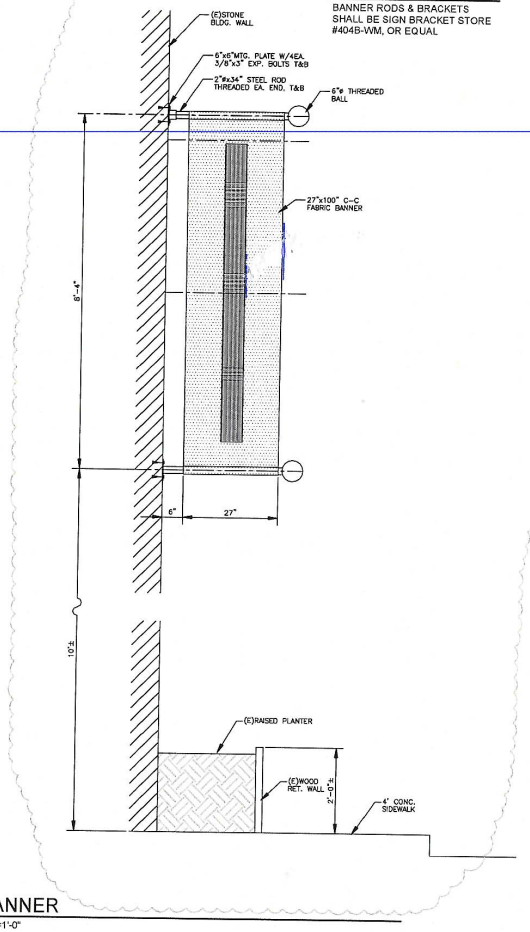


A / A-1 FLOOR PLAN
1"=10'-0"



B / A-1 FLOOR PLAN
NOT TO SCALE

NOTE:
BANNER RODS & BRACKETS SHALL BE SIGN BRACKET STORE #4048-WM, OR EQUAL



1 / A-1 BANNER
3/4"=1'-0"

REVISED
3:50 pm, Sep 26, 2022

RBB 6-30-22

1/4"=1'-0"

APN: 009-212-005

R. Bruce Ballentine ARCHITECT
Martinez, California (925)284-2423

TENANT IMPROVEMENTS
1345 RAILROAD AVE.
ST. HELENA, CA 94574

EXTERIOR BANNERS

DATE 7-3-22
SCALE 1/4"=1'-0"
DRAWN BY RBB
DWG FILE: A-1X
DRAWING NO. A-1
SHT 1 OF 1

© COPYRIGHT

REVISED
4:08 pm, Sep 26, 2022

VANGUARD PROPERTIES

September 26, 2022

City of St. Helena
Planning Department
1527 Railroad Avenue
St. Helena, CA 94574

RE: 1345 Railroad Avenue, St Helena, CA 94574 (File #PL22-036) Exterior Banner Sign Approval

Dear Planning Department:

We are following up on your correspondence requesting additional written information to our signage application, dated September 16, 2022. In answer to your questions, highlighted below;

As previously stated, we are requesting approval to install 2 exterior banner signs for our newly renovated real estate office at the above address (APN#009-212-005). We are requesting approval of (1) the two two-sided banner signs, measuring 27" x 100"with the Vanguard logo on each side, as shown on the attached photo.
(2) The site plan reflect measurements over the sidewalk and is well above code.
(3) The site plan has the correct sign area, see item #1
(4) The banner is double-sided.
(5) The banners support poles will be attached to the exterior of the building with 4 each 3/8" x 3" expansion bolts as shown in the drawing.
(6) Banner sign dimensions are noted on the drawing, i.e., Two banners , two sides, 27" wide, 100" long. Logo appears at the bottom of each.

Please refer to the attached rendering with additional details provided by our architectural firm, R. Bruce Ballentine.

The banner is made of Sunbrella canvas fabric and the color is a dark navy blue with white lettering depicting our Vanguard Properties Logo.
(Sunbrella at http://sunbrella.com-upholstery -canvas-navy-5439-0000).

We sincerely appreciate your consideration and look forward to responding with any further details you may require. I can be reached at patti@vanguardnapa.com or by phone at (760)835-7706.

Thank you.
PDR
Patricia Rollins
Administrator
Vanguard Properties St. Helena

VANGUARD
PROPERTIES

1345